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REFER TO:	LIGO-TS70107-00-B
SUBJECT:	Tom Herring's GPS output
NUMBER OF PAGES FAXED INCLUDING THIS COVER SHEET:	
8	

NOTE:

97/02/19
10:24:16

ligo.prt

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Globk Analysis

TOM HERRING'S PRINTOUT

COMMENTS BY
L. JONES, 3/4/97

GLOBK Ver 4.12H, Global solution

Solution commenced with: 1996/ 9/24 15:55 (1996.7328)
Solution ended with : 1996/10/ 1 21: 9 (1996.7526)
Solution refers to : 1996/10/ 1 20:36 (1996.7525) [Seconds tag 17.500]
Satellite IC epoch : 1996/10/ 1 12: 0 .00
GPS System Information : Time GPST Frame J2000 Precession IAU76 Radiation model BERNE
Run time : 1997/ 2/19 10:17 45.00

There were 22 exps from 22 global files in the solution
There were 116627 data used, 0 data not used and 116627 data total
There were 258 global parameters estimated
There were 9 stations, 0 radio sources, and 15 satellites

The prefit chi**2 for 3165 input parameters is .164

LIST file : ligo.gdl
COMMON file : ligo.com
MARKOV file : globk_ligo.cmd
GLORG CMD file :
APRIORI file :
NUTATION file :
PLANETARY file :
SD ORIENT file :
PMU file :
BACK SOLN file :
OUTGLOBAL file :
SVS EPHEM file : ligo.svs
SVS MARKOV file :
EARTHQUAKE file :

Summary of Markov file globk_ligo.cmd

* Command file for ligo data
make_svs ligo.svs
com_file ligo.com
srt_file ligo.srt

sol_file ligo.sol
prt_opt BLEN CMDS
apr_neu all 10 10 10 0 0 0
apr_neu drao_gps 0.001 0.001 0.001 0 0 0
apr_svs all 0.1 0.1 0.1 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01
apr_wob 0.1 0.1 0.05 0.05 0 0 0 0
apr_utl 0.1 0.5 0 0 0 0

PARAMETER ESTIMATES FROM GLOBK Vers 4.12H

#	PARAMETER	Estimate	Adjustment	Sigma
1.	0025_GPS X coordinate (m)	-2161425.3211	.1540	.0051
2.	0025_GPS Y coordinate (m)	-3834656.3106	-.2190	.0070
3.	0025_GPS Z coordinate (m)	4600375.0156	.1620	.0073
Unc.	0025_GPS -2161425.3211 -3834656.3106	4600375.0156	.0000 .0000	.0000 1996.753 .0051 .0070 .0073
Loc.	0025_GPS N coordinate (m)	5171401.2460	.0288	.0031
Loc.	0025_GPS E coordinate (m)	18451091.1831	.2417	.0033
Loc.	0025_GPS U coordinate (m)	140.7114	.1968	.0103
	NE,NU,EU position correlations	.0750	-.2384	-.0707
4.	0035_GPS X coordinate (m)	-2161457.0753	.0257	.0056
5.	0035_GPS Y coordinate (m)	-3834691.9109	-.0885	.0081
6.	0035_GPS Z coordinate (m)	4600330.7828	.0231	.0088
Unc.	0035_GPS -2161457.0753 -3834691.9109	4600330.7828	.0000 .0000	.0000 1996.753 .0056 .0081 .0088
Loc.	0035_GPS N coordinate (m)	5171336.9013	-.0306	.0035
Loc.	0035_GPS E coordinate (m)	18451081.0196	.0659	.0034
Loc.	0035_GPS U coordinate (m)	140.7571	.0612	.0123
	NE,NU,EU position correlations	-.0009	-.1693	-.0730
7.	0026_GPS X coordinate (m)	-2161864.4871	-.0636	.0051
8.	0026_GPS Y coordinate (m)	-3833087.4480	.0001	.0071
9.	0026_GPS Z coordinate (m)	4601467.3872	-.0159	.0073
Unc.	0026_GPS -2161864.4871 -3833087.4480	4601467.3872	.0000 .0000	.0000 1996.753 .0051 .0071 .0073
Loc.	0026_GPS N coordinate (m)	5172990.2649	-.0335	.0031
Loc.	0026_GPS E coordinate (m)	18445086.4841	-.0555	.0033
Loc.	0026_GPS U coordinate (m)	139.8176	.0099	.0105
	NE,NU,EU position correlations	.0916	-.2412	-.0613
10.	0027_GPS X coordinate (m)	-2161868.8544	.3456	.0048
11.	0027_GPS Y coordinate (m)	-3833071.8451	.2548	.0065
12.	0027_GPS Z coordinate (m)	4601478.2438	-.2362	.0064
Unc.	0027_GPS -2161868.8544 -3833071.8451	4601478.2438	.0000 .0000	.0000 1996.753 .0048 .0065 .0064
Loc.	0027_GPS N coordinate (m)	5173006.0622	.1198	.0030
Loc.	0027_GPS E coordinate (m)	18445075.0354	.1759	.0032

THIS COLUMN IS SIMPLY ROGERS' "ELLIP. HEIGHT" DATA, CONVERTED TO METERS. HE TOLD ME HE HAD APPARENTLY MADE A MISTAKE IN CONVERTING THESE.

THIS IS SIMPLY THE DIFFERENCE BETWEEN TOM'S ELEVATION DATA & ROGERS' EXPRESSED IN MM. HE CORRECTED THESE NOS. IN HIS 2/26 E-MAIL (I AGREE WITH ALL BUT HIS LAST 2 NOS.

THIS CORRECTION SHIFTS TOM'S ELEVATION REFERENCE FROM HIS CANADIAN POINT TO ROGERS' REFERENCED POINT (ERROR IN SHIFTING FROM SEA LEVEL), HIS 2/26 E-MAIL CORRECTS THIS TO 0.7516

+ Δ 0.730 m.

ROGERS 141.4568 TOM 141.441 -15.5

141.487 141.487 0.0

140.5615 140.5475 -14.0

ligo.prt

Loc.	0027_GPS U coordinate (m)	139.8064	-0.4410	.0093			
	NE,NU,EU position correlations	.0789	-.2860	-.0694			
13.	0036_GPS X coordinate (m)	-2163249.8273	-.0623	.0049			
14.	0036_GPS Y coordinate (m)	-3834640.7104	.0014	.0066			
15.	0036_GPS Z coordinate (m)	4599536.5040	-.0162	.0067			
Unc.	0036_GPS -2163249.8273 -3834640.7104 4599536.5040		.0000 .0000 .0000	1996.753 .0049 .0066 .0067			
Loc.	0036_GPS N coordinate (m)	5170182.1337	-.0324	.0030			
Loc.	0036_GPS E coordinate (m)	18453379.1618	-.0550	.0032	141.8133	141.796	-17.3 mm
Loc.	0036_GPS U coordinate (m)	141.0661	.0085	.0096			
	NE,NU,EU position correlations	.0847	-.2796	-.0771			
16.	0037_GPS X coordinate (m)	-2163267.6574	.0126	.0048			
17.	0037_GPS Y coordinate (m)	-3834640.2080	-.0180	.0066			
18.	0037_GPS Z coordinate (m)	4599528.6144	.0044	.0066			
Unc.	0037_GPS -2163267.6574 -3834640.2080 4599528.6144		.0000 .0000 .0000	1996.753 .0048 .0066 .0066			
Loc.	0037_GPS N coordinate (m)	5170170.6493	-.0039	.0030			
Loc.	0037_GPS E coordinate (m)	18453363.4134	.0198	.0032			
Loc.	0037_GPS U coordinate (m)	141.0835	.0097	.0095			
	NE,NU,EU position correlations	.0792	-.2838	-.0698			
19.	0028_GPS X coordinate (m)	-2162308.0172	-.0057	.0047			
20.	0028_GPS Y coordinate (m)	-3831502.9830	.0796	.0064			
21.	0028_GPS Z coordinate (m)	4602570.6110	-.0274	.0063			
Unc.	0028_GPS -2162308.0172 -3831502.9830 4602570.6110		.0000 .0000 .0000	1996.753 .0047 .0064 .0063			
Loc.	0028_GPS N coordinate (m)	5174594.8536	.0292	.0030			
Loc.	0028_GPS E coordinate (m)	18439069.1874	-.0441	.0032	140.2701	140.2479	-22.2 mm
Loc.	0028_GPS U coordinate (m)	139.5180	-.0657	.0091			
	NE,NU,EU position correlations	.0762	-.2868	-.0621			
22.	0038_GPS X coordinate (m)	-2165060.4220	.0269	.0048			
23.	0038_GPS Y coordinate (m)	-3834589.0306	.0066	.0065			
24.	0038_GPS Z coordinate (m)	4598734.3666	-.0513	.0065			
Unc.	0038_GPS -2165060.4220 -3834589.0306 4598734.3666		.0000 .0000 .0000	1996.753 .0048 .0065 .0065			
Loc.	0038_GPS N coordinate (m)	5169015.4630	-.0218	.0030			
Loc.	0038_GPS E coordinate (m)	18454690.6211	.0201	.0032	142.7858	142.7718	-14.0 mm
Loc.	0038_GPS U coordinate (m)	142.0419	-.0503	.0094			
	NE,NU,EU position correlations	.0765	-.2860	-.0689			
25.	DRAO_GPS X coordinate (m)	-2059164.6700	.0000	.0010			
26.	DRAO_GPS Y coordinate (m)	-3621108.3947	.0000	.0010			
27.	DRAO_GPS Z coordinate (m)	4814432.3823	.0000	.0010			
Unc.	DRAO_GPS -2059164.6700 -3621108.3947 4814432.3823		.0000 .0000 .0000	1996.753 .0010 .0010 .0010			
Loc.	DRAO_GPS N coordinate (m)	5490568.9136	.0000	.0010			
Loc.	DRAO_GPS E coordinate (m)	17441030.2614	.0000	.0010			
Loc.	DRAO_GPS U coordinate (m)	541.8706	.0000	.0010			
	NE,NU,EU position correlations	.0000	.0033	.0000			
28.	PRN_01 Inert. X (m)	22450635.6490	-.0360	.0776			
29.	PRN_01 Inert. Y (m)	-11730549.7134	.0146	.0971			
30.	PRN_01 Inert. Z (m)	8120971.4228	-.0072	.0984			
31.	PRN_01 Inert. dX/dT (mm/s)	1908894.7041	-.0019	.0093			
32.	PRN_01 Inert. dY/dT (mm/s)	1651535.2849	-.0011	.0098			
33.	PRN_01 Inert. dZ/dT (mm/s)	-2931058.3314	.0016	.0093			
34.	PRN_01 Direct Rad (none)	1.0260	.0008	.0098			
35.	PRN_01 Y Axis Bias (none)	-.0078	.0019	.0097			
36.	PRN_01 B Axis Bias (none)	.0033	.0006	.0099			
37.	PRN_01 Cos Direct (none)	-.0091	.0009	.0099			
38.	PRN_01 Sin Direct (none)	-.0065	-.0009	.0099			
39.	PRN_01 Cos Y Bias (none)	-.0020	-.0015	.0097			
40.	PRN_01 Sin Y Bias (none)	-.0006	-.0005	.0100			
41.	PRN_01 Cos B Bias (none)	-.0001	-.0002	.0100			
42.	PRN_01 Sin B Bias (none)	.0081	-.0011	.0099			
Loc.	PRN_01 Semimajor axis (m)	26561259.3646	-.1137	.1336			
Loc.	PRN_01 Eccentricity (none & m)	.0034480692	.0416	.1055			
Loc.	PRN_01 Inclination (degs & m)	54.6916494151	.0022	.0736			
Loc.	PRN_01 RA Node (degs & m)	165.5372321284	-.0011	.1177			
Loc.	PRN_01 Arg. Perigee (degs & m)	273.5843705275	18.3260	32.3195			
Loc.	PRN_01 M + w (degs & m)	158.3875413811	.0154	.1757			
43.	PRN_03 Inert. X (m)	5569586.3128	.0248	.0915			
44.	PRN_03 Inert. Y (m)	-16497977.2661	-.0051	.0917			
45.	PRN_03 Inert. Z (m)	-20154947.1476	-.0086	.0884			
46.	PRN_03 Inert. dX/dT (mm/s)	3674971.0253	.0003	.0087			
47.	PRN_03 Inert. dY/dT (mm/s)	-205596.8812	-.0012	.0098			
48.	PRN_03 Inert. dZ/dT (mm/s)	1172501.6486	-.0014	.0099			
49.	PRN_03 Direct Rad (none)	1.0231	-.0002	.0095			
50.	PRN_03 Y Axis Bias (none)	-.0149	-.0016	.0099			
51.	PRN_03 B Axis Bias (none)	.0004	-.0006	.0100			
52.	PRN_03 Cos Direct (none)	.0095	-.0002	.0098			
53.	PRN_03 Sin Direct (none)	-.0069	.0002	.0099			
54.	PRN_03 Cos Y Bias (none)	-.0007	-.0013	.0099			
55.	PRN_03 Sin Y Bias (none)	.0038	-.0006	.0100			
56.	PRN_03 Cos B Bias (none)	-.0003	-.0011	.0100			
57.	PRN_03 Sin B Bias (none)	-.0089	.0016	.0099			
Loc.	PRN_03 Semimajor axis (m)	26559044.3884	.0290	.1409			
Loc.	PRN_03 Eccentricity (none & m)	.0036208952	.0096	.1277			
Loc.	PRN_03 Inclination (degs & m)	54.6803116055	.0063	.0958			

Loc. PRN_03	RA Node	(degs & m)	343.7531604048	.0026	.0904
Loc. PRN_03	Arg. Perigee	(degs & m)	149.6291486731	9.8139	24.5323
Loc. PRN_03	M + w	(degs & m)	291.7116942081	-.0483	.1654
58. PRN_06	Inert. X	(m)	24658517.1790	.0020	.0902
59. PRN_06	Inert. Y	(m)	1078891.4606	.0006	.0975
60. PRN_06	Inert. Z	(m)	10278522.0874	.0034	.0948
61. PRN_06	Inert. dX/dT	(mm/s)	-1265361.1087	.0003	.0099
62. PRN_06	Inert. dY/dT	(mm/s)	2333392.9419	-.0001	.0099
63. PRN_06	Inert. dZ/dT	(mm/s)	2786407.6281	.0001	.0095
64. PRN_06	Direct Rad	(none)	1.0182	.0002	.0100
65. PRN_06	Y Axis Bias	(none)	-.0144	.0000	.0100
66. PRN_06	B Axis Bias	(none)	.0009	.0001	.0099
67. PRN_06	Cos Direct	(none)	.0062	.0000	.0100
68. PRN_06	Sin Direct	(none)	-.0051	.0002	.0100
69. PRN_06	Cos Y Bias	(none)	-.0015	-.0001	.0100
70. PRN_06	Sin Y Bias	(none)	-.0017	.0000	.0100
71. PRN_06	Cos B Bias	(none)	-.0012	.0000	.0100
72. PRN_06	Sin B Bias	(none)	-.0128	.0001	.0099
Loc. PRN_06	Semimajor axis	(m)	26561449.2012	.0049	.1928
Loc. PRN_06	Eccentricity	(none & m)	.0066143338	-.0020	.1406
Loc. PRN_06	Inclination	(degs & m)	55.0772737120	.0012	.0767
Loc. PRN_06	RA Node	(degs & m)	345.6020886995	-.0007	.1136
Loc. PRN_06	Arg. Perigee	(degs & m)	204.2532570566	.5962	17.5769
Loc. PRN_06	M + w	(degs & m)	28.0098978378	-.0056	.1720
73. PRN_09	Inert. X	(m)	17972105.9707	.0017	.0992
74. PRN_09	Inert. Y	(m)	19619558.0456	.0056	.0990
75. PRN_09	Inert. Z	(m)	-2238825.3003	-.0043	.0992
76. PRN_09	Inert. dX/dT	(mm/s)	-1845722.5119	.0001	.0099
77. PRN_09	Inert. dY/dT	(mm/s)	1334546.7784	.0004	.0100
78. PRN_09	Inert. dZ/dT	(mm/s)	-3108506.0163	-.0003	.0099
79. PRN_09	Direct Rad	(none)	1.0194	.0004	.0099
80. PRN_09	Y Axis Bias	(none)	-.0089	-.0002	.0100
81. PRN_09	B Axis Bias	(none)	.0014	-.0003	.0100
82. PRN_09	Cos Direct	(none)	.0006	.0000	.0100
83. PRN_09	Sin Direct	(none)	.0004	-.0002	.0100
84. PRN_09	Cos Y Bias	(none)	-.0018	-.0001	.0100
85. PRN_09	Sin Y Bias	(none)	-.0057	.0002	.0100
86. PRN_09	Cos B Bias	(none)	.0156	.0002	.0100
87. PRN_09	Sin B Bias	(none)	.0062	.0002	.0100
Loc. PRN_09	Semimajor axis	(m)	26562327.7134	.0152	.2344
Loc. PRN_09	Eccentricity	(none & m)	.0052229702	-.0100	.1650
Loc. PRN_09	Inclination	(degs & m)	54.1949108013	.0001	.0693
Loc. PRN_09	RA Node	(degs & m)	224.0294728718	-.0003	.1223
Loc. PRN_09	Arg. Perigee	(degs & m)	2.8676932915	1.2747	22.7506
Loc. PRN_09	M + w	(degs & m)	185.9664109847	-.0097	.1817
88. PRN_10	Inert. X	(m)	-2310821.2720	.0000	.1000
89. PRN_10	Inert. Y	(m)	25760126.8540	.0000	.1000
90. PRN_10	Inert. Z	(m)	-5853678.7580	.0000	.1000
91. PRN_10	Inert. dX/dT	(mm/s)	-2333698.3440	.0000	.0100
92. PRN_10	Inert. dY/dT	(mm/s)	486826.0990	.0000	.0100
93. PRN_10	Inert. dZ/dT	(mm/s)	3061531.4720	.0000	.0100
94. PRN_10	Direct Rad	(none)	1.0117	.0000	.0100
95. PRN_10	Y Axis Bias	(none)	-.0099	.0000	.0100
96. PRN_10	B Axis Bias	(none)	.0001	.0000	.0100
97. PRN_10	Cos Direct	(none)	-.0109	.0000	.0100
98. PRN_10	Sin Direct	(none)	.0014	.0000	.0100
99. PRN_10	Cos Y Bias	(none)	.0035	.0000	.0100
100. PRN_10	Sin Y Bias	(none)	.0017	.0000	.0100
101. PRN_10	Cos B Bias	(none)	-.0031	.0000	.0100
102. PRN_10	Sin B Bias	(none)	-.0042	.0000	.0100
Loc. PRN_10	Semimajor axis	(m)	26561277.7735	.0000	.2432
Loc. PRN_10	Eccentricity	(none & m)	.0016441275	.0000	.1697
Loc. PRN_10	Inclination	(degs & m)	55.0180445633	.0000	.0712
Loc. PRN_10	RA Node	(degs & m)	104.2383835316	.0000	.1199
Loc. PRN_10	Arg. Perigee	(degs & m)	340.2141851047	.0000	74.0142
Loc. PRN_10	M + w	(degs & m)	344.3565112687	.0000	.1831
103. PRN_14	Inert. X	(m)	-12855990.1730	.0000	.1000
104. PRN_14	Inert. Y	(m)	-8831246.8510	.0000	.1000
105. PRN_14	Inert. Z	(m)	21481155.4040	.0000	.1000
106. PRN_14	Inert. dX/dT	(mm/s)	1479783.9590	.0000	.0100
107. PRN_14	Inert. dY/dT	(mm/s)	-3535561.7200	.0000	.0100
108. PRN_14	Inert. dZ/dT	(mm/s)	-576872.1790	.0000	.0100
109. PRN_14	Direct Rad	(none)	1.0041	.0000	.0100
110. PRN_14	Y Axis Bias	(none)	-.0074	.0000	.0100
111. PRN_14	B Axis Bias	(none)	-.0020	.0000	.0100
112. PRN_14	Cos Direct	(none)	-.0071	.0000	.0100
113. PRN_14	Sin Direct	(none)	-.0015	.0000	.0100
114. PRN_14	Cos Y Bias	(none)	.0133	.0000	.0100
115. PRN_14	Sin Y Bias	(none)	-.0071	.0000	.0100
116. PRN_14	Cos B Bias	(none)	-.0078	.0000	.0100
117. PRN_14	Sin B Bias	(none)	-.0049	.0000	.0100
Loc. PRN_14	Semimajor axis	(m)	26559525.0244	.0000	.2427
Loc. PRN_14	Eccentricity	(none & m)	.0019362552	.0000	.1250
Loc. PRN_14	Inclination	(degs & m)	55.3354626865	.0000	.0992

Loc. PRN_14	RA Node	(degs & m)	106.7371613829	.0000	.0849
Loc. PRN_14	Arg. Perigee	(degs & m)	175.5538174551	.0000	86.2595
Loc. PRN_14	M + w	(degs & m)	100.5326534886	.0000	.1764
118. PRN_15	Inert. X	(m)	-17663029.8337	.0073	.0974
119. PRN_15	Inert. Y	(m)	-19797754.8960	.0090	.0962
120. PRN_15	Inert. Z	(m)	-851287.6826	.0014	.1000
121. PRN_15	Inert. dX/dT	(mm/s)	1669177.4168	-.0002	.0099
122. PRN_15	Inert. dY/dT	(mm/s)	-1387285.0876	.0004	.0099
123. PRN_15	Inert. dZ/dT	(mm/s)	-3211602.0932	.0008	.0097
124. PRN_15	Direct Rad	(none)	1.0090	-.0007	.0097
125. PRN_15	Y Axis Bias	(none)	-.0063	.0006	.0097
126. PRN_15	B Axis Bias	(none)	-.0024	.0003	.0099
127. PRN_15	Cos Direct	(none)	-.0034	.0001	.0100
128. PRN_15	Sin Direct	(none)	.0011	.0004	.0099
129. PRN_15	Cos Y Bias	(none)	.0090	-.0003	.0100
130. PRN_15	Sin Y Bias	(none)	.0089	-.0003	.0099
131. PRN_15	Cos B Bias	(none)	-.0054	-.0003	.0100
132. PRN_15	Sin B Bias	(none)	-.0178	-.0002	.0100
Loc. PRN_15	Semimajor axis	(m)	26561857.1634	-.0356	.2168
Loc. PRN_15	Eccentricity	(none & m)	.0069898504	-.0042	.1215
Loc. PRN_15	Inclination	(degs & m)	55.9916929380	-.0006	.0685
Loc. PRN_15	RA Node	(degs & m)	47.0210251809	.0002	.1207
Loc. PRN_15	Arg. Perigee	(degs & m)	96.9025413227	-3.3836	21.8472
Loc. PRN_15	M + w	(degs & m)	181.4191523151	.0030	.1826
133. PRN_17	Inert. X	(m)	19981789.5791	-.0079	.0970
134. PRN_17	Inert. Y	(m)	5643451.4376	-.0254	.0973
135. PRN_17	Inert. Z	(m)	-16945597.2637	.0233	.0977
136. PRN_17	Inert. dX/dT	(mm/s)	869250.0043	-.0017	.0099
137. PRN_17	Inert. dY/dT	(mm/s)	3121024.7181	-.0009	.0098
138. PRN_17	Inert. dZ/dT	(mm/s)	2059502.2743	-.0007	.0100
139. PRN_17	Direct Rad	(none)	1.0037	-.0019	.0099
140. PRN_17	Y Axis Bias	(none)	-.0023	.0015	.0099
141. PRN_17	B Axis Bias	(none)	.0057	-.0006	.0099
142. PRN_17	Cos Direct	(none)	-.0030	-.0015	.0099
143. PRN_17	Sin Direct	(none)	-.0043	-.0002	.0100
144. PRN_17	Cos Y Bias	(none)	.0033	.0012	.0099
145. PRN_17	Sin Y Bias	(none)	.0112	.0003	.0100
146. PRN_17	Cos B Bias	(none)	-.0024	-.0005	.0099
147. PRN_17	Sin B Bias	(none)	-.0035	.0002	.0100
Loc. PRN_17	Semimajor axis	(m)	26559794.6412	-.0714	.2208
Loc. PRN_17	Eccentricity	(none & m)	.0091034694	.0444	.1577
Loc. PRN_17	Inclination	(degs & m)	56.0510046397	-.0208	.0854
Loc. PRN_17	RA Node	(degs & m)	49.0990350659	-.0108	.0997
Loc. PRN_17	Arg. Perigee	(degs & m)	135.3794956406	-2.2556	12.9667
Loc. PRN_17	M + w	(degs & m)	310.2479345480	.0294	.1754
148. PRN_21	Inert. X	(m)	14549363.8104	-.0036	.0898
149. PRN_21	Inert. Y	(m)	-16686991.6164	-.0044	.0971
150. PRN_21	Inert. Z	(m)	-14171132.7344	.0056	.0955
151. PRN_21	Inert. dX/dT	(mm/s)	1011960.7917	-.0003	.0099
152. PRN_21	Inert. dY/dT	(mm/s)	2897500.9084	.0004	.0097
153. PRN_21	Inert. dZ/dT	(mm/s)	-2429190.0976	.0004	.0095
154. PRN_21	Direct Rad	(none)	1.0119	-.0005	.0099
155. PRN_21	Y Axis Bias	(none)	-.0058	-.0012	.0096
156. PRN_21	B Axis Bias	(none)	.0011	-.0001	.0098
157. PRN_21	Cos Direct	(none)	.0050	-.0004	.0099
158. PRN_21	Sin Direct	(none)	-.0027	.0003	.0100
159. PRN_21	Cos Y Bias	(none)	.0037	-.0006	.0099
160. PRN_21	Sin Y Bias	(none)	.0045	.0008	.0097
161. PRN_21	Cos B Bias	(none)	-.0022	-.0004	.0100
162. PRN_21	Sin B Bias	(none)	-.0130	-.0004	.0099
Loc. PRN_21	Semimajor axis	(m)	26560484.3559	-.0040	.1893
Loc. PRN_21	Eccentricity	(none & m)	.0129121361	-.0086	.1216
Loc. PRN_21	Inclination	(degs & m)	54.9788183803	-.0001	.0826
Loc. PRN_21	RA Node	(degs & m)	104.4342872423	-.0009	.1070
Loc. PRN_21	Arg. Perigee	(degs & m)	183.8520407040	.6548	10.2773
Loc. PRN_21	M + w	(degs & m)	220.2804353689	.0166	.1740
163. PRN_22	Inert. X	(m)	5534795.3195	-.0105	.0951
164. PRN_22	Inert. Y	(m)	-25725158.0254	.0176	.0773
165. PRN_22	Inert. Z	(m)	-484108.0111	-.0071	.0975
166. PRN_22	Inert. dX/dT	(mm/s)	2251024.4945	-.0005	.0096
167. PRN_22	Inert. dY/dT	(mm/s)	428301.5750	.0010	.0097
168. PRN_22	Inert. dZ/dT	(mm/s)	3167513.1486	-.0004	.0095
169. PRN_22	Direct Rad	(none)	.9246	.0000	.0099
170. PRN_22	Y Axis Bias	(none)	-.0135	.0002	.0099
171. PRN_22	B Axis Bias	(none)	.0063	.0005	.0099
172. PRN_22	Cos Direct	(none)	.0160	-.0001	.0099
173. PRN_22	Sin Direct	(none)	.0050	.0001	.0100
174. PRN_22	Cos Y Bias	(none)	.0046	.0001	.0099
175. PRN_22	Sin Y Bias	(none)	-.0030	.0002	.0100
176. PRN_22	Cos B Bias	(none)	.0128	.0004	.0099
177. PRN_22	Sin B Bias	(none)	.0006	.0002	.0100
Loc. PRN_22	Semimajor axis	(m)	26560845.2993	-.0461	.1565
Loc. PRN_22	Eccentricity	(none & m)	.0091765083	-.0246	.1252
Loc. PRN_22	Inclination	(degs & m)	54.1364984300	-.0005	.0680

Loc. PRN_22	RA Node	(degs & m)	282.9041922487	-.0012	.1245
Loc. PRN_22	Arg. Perigee	(degs & m)	4.3783992011	2.1492	11.7014
Loc. PRN_22	M + w	(degs & m)	358.8027672346	.0250	.1723
178. PRN_23	Inert. X	(m)	16020208.6366	-.0164	.0904
179. PRN_23	Inert. Y	(m)	-3960943.0275	-.0005	.0979
180. PRN_23	Inert. Z	(m)	-20453250.1849	.0101	.0889
181. PRN_23	Inert. dX/dT	(mm/s)	-366555.8941	-.0001	.0100
182. PRN_23	Inert. dY/dT	(mm/s)	3758831.9058	-.0012	.0096
183. PRN_23	Inert. dZ/dT	(mm/s)	-1031036.5786	.0004	.0095
184. PRN_23	Direct Rad	(none)	.9247	.0010	.0100
185. PRN_23	Y Axis Bias	(none)	-.0094	.0007	.0099
186. PRN_23	B Axis Bias	(none)	.0051	.0004	.0098
187. PRN_23	Cos Direct	(none)	.0046	.0007	.0100
188. PRN_23	Sin Direct	(none)	-.0070	.0000	.0100
189. PRN_23	Cos Y Bias	(none)	-.0170	.0001	.0100
190. PRN_23	Sin Y Bias	(none)	.0017	-.0007	.0099
191. PRN_23	Cos B Bias	(none)	-.0034	.0003	.0100
192. PRN_23	Sin B Bias	(none)	.0063	-.0003	.0099
Loc. PRN_23	Semimajor axis	(m)	26559298.6845	-.0534	.1820
Loc. PRN_23	Eccentricity	(none & m)	.0109636713	-.0345	.1242
Loc. PRN_23	Inclination	(degs & m)	55.1676910441	.0073	.0975
Loc. PRN_23	RA Node	(degs & m)	106.5208099025	-.0017	.0872
Loc. PRN_23	Arg. Perigee	(degs & m)	234.4218496952	-.6485	11.3727
Loc. PRN_23	M + w	(degs & m)	251.1023627644	.0058	.1644
193. PRN_25	Inert. X	(m)	8314750.1210	.0010	.0998
194. PRN_25	Inert. Y	(m)	-13565056.0598	-.0028	.0994
195. PRN_25	Inert. Z	(m)	21345959.1276	.0036	.0988
196. PRN_25	Inert. dX/dT	(mm/s)	3005526.1612	.0002	.0099
197. PRN_25	Inert. dY/dT	(mm/s)	2406755.4103	.0003	.0099
198. PRN_25	Inert. dZ/dT	(mm/s)	331152.5600	.0000	.0100
199. PRN_25	Direct Rad	(none)	1.0246	.0000	.0100
200. PRN_25	Y Axis Bias	(none)	-.0113	.0004	.0099
201. PRN_25	B Axis Bias	(none)	-.0051	-.0001	.0100
202. PRN_25	Cos Direct	(none)	-.0057	.0000	.0100
203. PRN_25	Sin Direct	(none)	.0069	.0002	.0100
204. PRN_25	Cos Y Bias	(none)	.0045	-.0003	.0100
205. PRN_25	Sin Y Bias	(none)	-.0012	.0001	.0100
206. PRN_25	Cos B Bias	(none)	.0063	.0001	.0100
207. PRN_25	Sin B Bias	(none)	.0130	.0002	.0100
Loc. PRN_25	Semimajor axis	(m)	26558314.5457	.0139	.2332
Loc. PRN_25	Eccentricity	(none & m)	.0062226819	-.0028	.1287
Loc. PRN_25	Inclination	(degs & m)	53.7889416981	-.0001	.0995
Loc. PRN_25	RA Node	(degs & m)	222.2973105651	.0003	.0857
Loc. PRN_25	Arg. Perigee	(degs & m)	197.0277951494	-1.4344	25.3498
Loc. PRN_25	M + w	(degs & m)	84.2311007854	.0010	.1769
208. PRN_26	Inert. X	(m)	7040555.0730	-.0020	.0995
209. PRN_26	Inert. Y	(m)	13738885.3622	.0052	.0893
210. PRN_26	Inert. Z	(m)	-21488628.5411	-.0071	.0830
211. PRN_26	Inert. dX/dT	(mm/s)	-3658261.0406	.0004	.0095
212. PRN_26	Inert. dY/dT	(mm/s)	1272559.3503	.0003	.0097
213. PRN_26	Inert. dZ/dT	(mm/s)	-344273.5114	-.0004	.0097
214. PRN_26	Direct Rad	(none)	1.0165	.0004	.0098
215. PRN_26	Y Axis Bias	(none)	-.0105	.0000	.0100
216. PRN_26	B Axis Bias	(none)	-.0057	-.0002	.0099
217. PRN_26	Cos Direct	(none)	-.0080	.0002	.0100
218. PRN_26	Sin Direct	(none)	-.0039	-.0003	.0099
219. PRN_26	Cos Y Bias	(none)	.0005	.0000	.0100
220. PRN_26	Sin Y Bias	(none)	-.0046	-.0001	.0100
221. PRN_26	Cos B Bias	(none)	-.0002	-.0001	.0100
222. PRN_26	Sin B Bias	(none)	.0118	.0002	.0099
Loc. PRN_26	Semimajor axis	(m)	26558009.0206	.0122	.1583
Loc. PRN_26	Eccentricity	(none & m)	.0092801768	-.0061	.1295
Loc. PRN_26	Inclination	(degs & m)	54.8584006421	.0004	.1001
Loc. PRN_26	RA Node	(degs & m)	164.4063801436	-.0006	.0840
Loc. PRN_26	Arg. Perigee	(degs & m)	330.1421363552	-.7803	11.1225
Loc. PRN_26	M + w	(degs & m)	264.2724342852	-.0122	.1642
223. PRN_28	Inert. X	(m)	20400029.8706	-.0084	.0701
224. PRN_28	Inert. Y	(m)	-13297803.6925	.0255	.0961
225. PRN_28	Inert. Z	(m)	-10749966.7919	.0161	.0970
226. PRN_28	Inert. dX/dT	(mm/s)	2334440.8936	-.0014	.0088
227. PRN_28	Inert. dY/dT	(mm/s)	1320633.4453	-.0027	.0098
228. PRN_28	Inert. dZ/dT	(mm/s)	2783697.7228	-.0032	.0096
229. PRN_28	Direct Rad	(none)	1.0241	-.0006	.0098
230. PRN_28	Y Axis Bias	(none)	-.0170	-.0031	.0098
231. PRN_28	B Axis Bias	(none)	.0004	.0004	.0100
232. PRN_28	Cos Direct	(none)	.0065	-.0007	.0098
233. PRN_28	Sin Direct	(none)	-.0041	.0003	.0100
234. PRN_28	Cos Y Bias	(none)	.0033	-.0025	.0098
235. PRN_28	Sin Y Bias	(none)	-.0001	-.0011	.0100
236. PRN_28	Cos B Bias	(none)	-.0015	-.0010	.0100
237. PRN_28	Sin B Bias	(none)	-.0019	.0020	.0099
Loc. PRN_28	Semimajor axis	(m)	26562283.7437	-.1072	.1306
Loc. PRN_28	Eccentricity	(none & m)	.0025037098	.0830	.1233
Loc. PRN_28	Inclination	(degs & m)	55.7006135228	.0085	.0769

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Loc. PRN_28	RA Node	(degs & m)	344.4271075755	.0073	.1127
Loc. PRN_28	Arg. Perigee	(degs & m)	182.6483296989	-8.5683	33.2787
Loc. PRN_28	M + w	(degs & m)	330.5823281111	-.0404	.1622
238. PRN_31	Inert. X	(m)	-10582349.4767	.0143	.0981
239. PRN_31	Inert. Y	(m)	-12285165.7282	-.0012	.0962
240. PRN_31	Inert. Z	(m)	-21219169.2000	.0070	.0898
241. PRN_31	Inert. dX/dT	(mm/s)	3431121.7991	-.0009	.0095
242. PRN_31	Inert. dY/dT	(mm/s)	-1567067.3420	.0000	.0098
243. PRN_31	Inert. dZ/dT	(mm/s)	-784913.0036	-.0006	.0098
244. PRN_31	Direct Rad	(none)	1.0148	-.0013	.0096
245. PRN_31	Y Axis Bias	(none)	-.0097	-.0024	.0098
246. PRN_31	B Axis Bias	(none)	-.0001	-.0001	.0099
247. PRN_31	Cos Direct	(none)	.0042	-.0008	.0099
248. PRN_31	Sin Direct	(none)	-.0019	.0013	.0098
249. PRN_31	Cos Y Bias	(none)	-.0042	-.0017	.0099
250. PRN_31	Sin Y Bias	(none)	.0016	-.0001	.0100
251. PRN_31	Cos B Bias	(none)	.0093	-.0007	.0100
252. PRN_31	Sin B Bias	(none)	-.0102	.0018	.0099
Loc. PRN_31	Semimajor axis	(m)	26559945.1410	-.0299	.1843
Loc. PRN_31	Eccentricity	(none & m)	.0067218780	.0056	.1220
Loc. PRN_31	Inclination	(degs & m)	55.1901638825	-.0013	.0978
Loc. PRN_31	RA Node	(degs & m)	343.7713876103	.0018	.0866
Loc. PRN_31	Arg. Perigee	(degs & m)	40.0498151166	3.7764	19.0972
Loc. PRN_31	M + w	(degs & m)	255.8569156916	-.0242	.1713
253. X-pole position	(mas)		265.4667	.0147	.3719
254. Y-pole position	(mas)		223.7983	-.0147	.3719
255. X-pole rate	(ms/d)		-1.6969	.0021	.0500
256. Y-pole rate	(ms/d)		-3.4858	-.0018	.0500
257. UT1-AT	(mts)		-29937.6984	.0556	.2044
258. UT1-AT rate	(ms/d)		-1.7533	.0077	.0285
Pole/UT1 correlations: XY, XU, YU					
			-.0003	-.0178	-.0102

GLOBK: BASELINE LENGTHS

BASELINE	Length (m)	Adjust (m)	Sigma (m)
0025_GPS to 0035_GPS	65.0558	.0849	.0020
0025_GPS to 0026_GPS	1961.4974	.1249	.0011
0025_GPS to 0027_GPS	1981.0010	.1140	.0011
0025_GPS to 0036_GPS	2008.0258	.2727	.0010
0025_GPS to 0037_GPS	2027.5249	.1959	.0010
0025_GPS to 0028_GPS	3942.4949	.1690	.0010
0025_GPS to 0038_GPS	3988.7610	.2074	.0009
0025_GPS to DRAO_GPS	319187.2638	-.0115	.0030
0035_GPS to 0026_GPS	2008.0227	.0669	.0020
0035_GPS to 0027_GPS	2027.5212	.0624	.0019
0035_GPS to 0036_GPS	1961.4943	.0987	.0013
0035_GPS to 0037_GPS	1980.9985	.0215	.0013
0035_GPS to 0028_GPS	3988.7584	.1127	.0018
0035_GPS to 0038_GPS	3942.4912	.0316	.0013
0035_GPS to DRAO_GPS	319250.9193	.0355	.0034
0026_GPS to 0027_GPS	19.5036	-.0250	.0010
0026_GPS to 0036_GPS	2839.0318	-.0011	.0011
0026_GPS to 0037_GPS	2852.8565	-.0414	.0013
0026_GPS to 0028_GPS	1980.9975	.0441	.0010
0026_GPS to 0038_GPS	4465.2157	-.0453	.0011
0026_GPS to DRAO_GPS	317547.5722	.0311	.0030
0027_GPS to 0036_GPS	2852.8543	.1870	.0009
0027_GPS to 0037_GPS	2866.6124	.1481	.0007
0027_GPS to 0028_GPS	1961.4939	.0547	.0007
0027_GPS to 0038_GPS	4474.0158	.1981	.0007
0027_GPS to DRAO_GPS	317531.2881	-.1235	.0029
0036_GPS to 0037_GPS	19.5042	-.0773	.0008
0036_GPS to 0028_GPS	4465.2150	.0593	.0007
0036_GPS to 0038_GPS	1980.9968	-.0671	.0008
0036_GPS to DRAO_GPS	320327.9699	.0302	.0030
0037_GPS to 0028_GPS	4474.0176	.0429	.0007
0037_GPS to 0038_GPS	1961.4927	.0101	.0007
0037_GPS to DRAO_GPS	320338.7219	.0050	.0029
0028_GPS to 0038_GPS	5640.5844	.0403	.0007
0028_GPS to DRAO_GPS	315895.3038	-.0328	.0029
0038_GPS to DRAO_GPS	321424.2152	.0212	.0029

GLOBK: BASELINE COMPONENTS

Baseline	North			East			Rne	Height		
	Est.	Adj.	+-	Est.	Adj.	+-		Est.	Adj.	+-
	(mm)									
0035_GPS-0025_GPS	-64345.1	-59.4	2.0	-10163.9	-175.8	1.4	-.285	45.7	-135.6	10.7
0026_GPS-0025_GPS	1589018.4	-62.3	1.3	-6004699.6	-297.2	.9	.191	-893.7	-186.9	7.3
0027_GPS-0025_GPS	1604813.9	91.0	1.2	-6016147.8	-65.8	.9	-.021	-905.0	-637.8	6.8
0036_GPS-0025_GPS	-1219112.9	-61.2	1.2	2287978.1	-296.7	.9	.019	354.7	-188.3	7.1
0037_GPS-0025_GPS	-1230597.3	-32.7	1.2	2272229.8	-221.9	.9	-.024	372.1	-187.1	7.1
0028_GPS-0025_GPS	3193606.7	.3	1.0	-12021996.3	-285.7	.8	-.058	-1193.4	-262.5	6.2
0038_GPS-0025_GPS	-2385783.7	-50.6	1.0	3599437.5	-221.6	.8	-.032	1330.5	-247.1	6.2
DRAO_GPS-0025_GPS	319167667.0	-28.8	3.0	-1010060922.2	-241.7	3.1	.083	401159.2	-196.8	10.3

0026_GPS-0035_GPS	1653363.4	-2.9	2.1	-5994535.7	-121.4	1.4	-.215	-939.5	-51.3	11.0
0027_GPS-0035_GPS	1669159.0	150.4	1.9	-6005984.0	110.0	1.3	-.308	-950.8	-502.2	9.8
0036_GPS-0035_GPS	-1154767.8	-1.8	1.9	2298142.0	-120.8	1.3	-.318	308.9	-52.7	9.8
0037_GPS-0035_GPS	-1166252.2	26.7	1.9	2282393.7	-46.1	1.3	-.320	326.3	-51.5	9.6
0028_GPS-0035_GPS	3257951.8	59.7	1.8	-12011832.4	-109.9	1.2	-.385	-1239.1	-126.9	8.7
0038_GPS-0035_GPS	-2321438.6	8.8	1.9	3609601.4	-45.8	1.3	-.316	1284.7	-111.5	9.8
DRAO_GPS-0035_GPS	319232012.1	30.6	3.3	-1010050758.3	-65.9	3.2	-.001	401113.4	-61.2	12.2
0027_GPS-0026_GPS	15795.5	153.3	1.2	-11448.3	231.4	.9	.131	-11.3	-451.0	6.9
0036_GPS-0026_GPS	-2808131.2	1.0	1.1	8292677.7	.5	.8	.193	1248.4	-1.5	6.8
0037_GPS-0026_GPS	-2819615.7	29.6	1.2	8276929.4	75.3	.9	.130	1265.8	-.2	7.4
0028_GPS-0026_GPS	1604588.3	62.6	1.1	-6017296.7	11.4	.8	.145	-299.6	-75.7	6.7
0038_GPS-0026_GPS	-3974802.1	11.7	1.1	9604137.1	75.6	.8	.128	2224.2	-60.2	6.4
DRAO_GPS-0026_GPS	317578648.6	33.5	3.0	-1004056222.6	55.5	3.1	.102	402052.9	-9.9	10.4
0036_GPS-0027_GPS	-2823926.7	-152.3	.9	8304126.0	-230.9	.7	.096	1259.7	449.5	5.4
0037_GPS-0027_GPS	-2835411.2	-123.7	.7	8288377.7	-156.1	.6	.061	1277.1	450.8	4.5
0028_GPS-0027_GPS	1588792.8	-90.7	.8	-6005848.5	-219.9	.6	.033	-288.3	375.3	4.6
0038_GPS-0027_GPS	-3990597.6	-141.6	.7	9615585.4	-155.8	.5	-.035	2235.5	390.8	4.0
DRAO_GPS-0027_GPS	317362853.1	-119.8	2.9	-1004044774.4	-175.9	3.1	.088	402064.2	441.0	9.2
0037_GPS-0036_GPS	-11484.5	28.6	.9	-15748.3	74.8	.7	.061	17.4	1.3	5.7
0028_GPS-0036_GPS	4412719.6	61.6	.7	-14309974.4	10.9	.6	.006	-1548.0	-74.2	4.6
0038_GPS-0036_GPS	-1166670.9	10.7	.9	1311459.4	75.1	.7	.050	975.8	-58.7	5.5
DRAO_GPS-0036_GPS	320386779.8	32.4	2.9	-1012348900.3	55.0	3.1	.095	400804.5	-8.5	9.5
0028_GPS-0037_GPS	4424204.0	33.0	.7	-14294226.1	-63.9	.5	.041	-1565.4	-75.4	4.2
0038_GPS-0037_GPS	-1155186.4	-17.9	.9	1327207.7	.3	.7	.018	958.4	-60.0	5.1
DRAO_GPS-0037_GPS	320398264.3	3.9	2.9	-1012333152.1	-19.8	3.1	.089	400787.1	-9.7	9.4
0038_GPS-0028_GPS	-5579390.4	-50.9	.7	15621433.8	64.2	.6	.013	2523.8	15.5	4.4
DRAO_GPS-0028_GPS	315974060.3	-29.2	2.8	-998038925.9	44.1	3.0	.085	402352.5	65.7	9.0
DRAO_GPS-0038_GPS	321553450.7	21.8	2.9	-1013660359.7	-20.1	3.1	.086	399828.7	50.2	9.3