

IBGE COMBINATION REPORT

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RESULTS  
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1) STATISTICS OF COMBINATION

So1	No. STATIONS	Rms (mm)*	Chi**2/DOF	1/(Chi**2/DOF)
CIM	88	1.95	3.82	0.262
DGF	84	1.58	2.49	0.402
ECU	56	1.66	2.75	0.364
IBG	125	1.86	3.45	0.290
IGA	77	1.55	2.40	0.417
LUZ	77	1.47	2.15	0.465
URY	58	1.59	2.53	0.395
COMBINATION	181	1.71	2.92	0.342

\* A posteriori RMS of unit weight

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2) STATIONS USED FOR DATUM DEFINITION  
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BRAZ 41606M001  
 CHPI 41609M003  
 CONZ 41719M002  
 CRO1 43201M001  
 GOLD 40405S031  
 ISPA 41703M007  
 LPGS 41510M001  
 MANA 41201S001  
 MDO1 40442M012  
 OHI2 66008M005  
 PIE1 40456M001  
 SANT 41705M003  
 SCUB 40701M001  
 UNSA 41514M001  
 VESL 66009M001

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3) HELMERT TRANSFORMATION PARAMETERS WITH RESPECT TO COMBINED SOLUTION  
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So1	Rms (m)	Translation (m)			Rotation (")			Scale (ppm)
		X	Y	Z	X	Y	Z	
1	0.00260	0.0039	0.0017	0.0022	-0.0001	-0.0001	0.0001	0.00029
2	0.00165	0.0002	0.0007	0.0003	0.0000	0.0001	0.0000	0.00036
3	0.00148	-0.0029	-0.0025	0.0039	-0.0001	-0.0001	-0.0001	-0.00021
4	0.00163	-0.0003	0.0013	-0.0036	0.0001	0.0000	0.0000	-0.00028
5	0.00142	-0.0021	-0.0002	-0.0021	0.0001	0.0000	-0.0001	-0.00021
6	0.00229	-0.0030	-0.0009	-0.0025	0.0001	0.0000	-0.0001	-0.00028
7	0.00232	-0.0001	-0.0015	-0.0005	-0.0001	0.0000	0.0000	-0.00022

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4)PROBLEMS FOUND  
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5)EXCLUDED STATIONS  
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NONE

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6)RMS of RESIDUALS in mm  
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With respect to the IGS05 stations(Minimum constrain solution):  
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Sol.	N	E	U
CIM	2.4	2.8	3.7
DGF	1.5	2.5	4.0
ECU	1.1	0.8	2.8
IBG	1.8	1.8	5.1
IGA	1.3	1.2	2.6
LUZ	1.3	1.9	3.5
URY	0.7	1.0	2.6

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CIM Minimum constrain solution with respect to WEEK SOLUTIONS:  
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Sol.	N	E	U
IGA	2.1	3.2	5.0

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DGF Minimum constrain solution with respect to WEEK SOLUTIONS:  
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Sol.	N	E	U
CIM	1.1	1.2	3.7
IGA	1.3	1.7	4.5

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ECU Minimum constrain solution with respect to WEEK SOLUTIONS:  
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Sol.	N	E	U
CIM	2.2	2.2	3.0
DGF	1.4	1.6	4.4
IBG	1.1	1.2	4.0
IGA	1.0	0.9	3.5
LUZ	1.0	3.5	3.5
URY	0.8	0.5	3.3

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IBG minimum constrain solution with respect to WEEK SOLUTIONS:  
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Sol.	N	E	U
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CIM	1.5	2.5	4.1
DGF	1.1	2.4	4.9
IGA	1.0	1.1	4.5

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IGA minimum constrain solution with respect to WEEK SOLUTIONS:  
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Sol.	N	E	U
CIM	2.1	3.2	5.0
DGF	1.3	1.7	4.5
ECU	1.0	0.9	3.5
IBG	1.0	1.1	4.5
IGS	1.3	1.2	2.6
LUZ	1.0	2.8	3.1
URY	0.5	0.7	3.9

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LUZ minimum constrain solution with respect to WEEK SOLUTIONS:  
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Sol.	N	E	U
CIM	2.5	3.7	4.9
DGF	1.6	3.2	5.0
IBG	1.1	2.5	6.0
IGA	1.0	2.8	3.1
URY	1.0	0.5	2.3

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URY minimum constrain solution with respect to WEEK SOLUTIONS:  
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Sol.	N	E	U
CIM	0.9	1.6	3.7
DGF	0.8	1.2	2.6
IBG	0.8	0.6	3.2
IGA	0.5	0.7	3.9

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7)RMS of RESIDUALS in mm  
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IBG final solution with respect to IGS and SIR WEEK SOLUTIONS:  
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Sol.	N	E	U
IGS	1.4	1.7	2.6
SIR	0.1	0.1	0.6

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8)RESULT FILES  
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IBG1575S.SNX      covariance matrix loosely constrained weekly combination  
IBG10P1575.SNX    covariance matrix constrained weekly combination  
IBG10P1575.SUM      SUMMARY FILE OF Repeatability

9)COMPARISON OF STATION COORDINATES BETWEEN PROCESSING CENTERS

Total number of stations: 181

Station	#Days	Weekday 0123456	Repeatability (mm)		
			N	E	U
ABCC 41939M001	3	X XX	0.45	0.99	1.72
ABPD 41941M001	3	X XX	0.49	1.00	1.19
ABPW 41940M001	3	X XX	0.72	5.24	1.44
ALAR 41653M001	3	X X X	0.68	2.44	2.99
ALUM 41535M001	2	X X	0.69	0.98	7.24
ARCA 41909S001	3	X XX	1.41	4.08	1.66
AREQ 42202M005	7	XXXXXXX	0.73	2.61	2.60
AUTF 41515S001	2	X X	2.18	1.14	1.30
AZUE 41301M001	3	X XX	0.51	2.54	1.69
AZUL 41529M001	2	X X	1.47	0.23	3.58
BAIR 41665M001	3	X X X	0.46	1.51	0.96
BATF 41666M001	3	XX X	0.34	0.49	2.19
BAVC 41669M001	3	XXX	0.63	0.45	2.22
BCAR 41539M001	2	X X	1.02	0.45	1.89
BDOS 43401M001	3	X XX	0.99	2.52	3.05
BELE 41622M001	3	X X X	0.94	1.67	0.86
BOAV 41636M001	4	X XXX	0.14	1.64	2.42
BOGA 41901M002	3	X XX	0.72	1.36	0.58
BOGT 41901M001	5	XX XXX	0.72	1.20	3.31
BOMJ 41612M001	3	XXX	0.53	1.73	2.87
BRAZ 41606M001	4	XXXX	0.46	0.68	1.68
BRMU 42501S004	3	X XX	0.88	1.60	2.72
BUEN 41912S001	3	X XX	0.26	3.07	1.18
CALL 42205M001	4	XXXX	1.22	1.80	5.52
CASI 41914S001	3	X XX	0.63	0.80	1.09
CATA 41534M001	2	X X	0.68	0.71	1.72
CBSB 80402M001	3	X XX	0.52	1.02	7.61
CEEU 41602M003	3	X X X	0.49	1.64	2.99
CEFE 41637M001	3	X X X	0.38	2.38	1.30
CFAG 41517S001	3	XX X	0.44	1.04	0.38
CHET 40526M001	2	XX	0.59	1.08	2.48
CHIH 40525M001	3	X XX	0.73	0.82	1.29
CHPI 41609M003	6	XX XXXX	0.38	0.95	1.71
COL2 40524M001	2	XX	0.23	0.30	1.42
CONZ 41719M002	4	XX X X	0.43	1.15	1.01
COPO 41714S001	3	XX X	0.58	1.11	1.99
COYQ 41715S001	3	X X X	1.37	0.70	3.75
CRCS 42401M001	3	XXX	0.77	0.99	3.12
CRO1 43201M001	6	XXXXXX	1.02	0.85	2.79
CSLO 41540M001	2	X X	0.40	1.67	1.33
CUCU 41904S001	3	X XX	1.18	0.38	3.67
CUEC 42009M001	3	X XX	1.36	2.26	1.56
CUIB 41603M001	3	X X X	0.69	0.63	4.17
CULC 40529M001	2	XX	0.59	0.43	1.03
CUM3 42404M001	4	X XXX	0.39	3.28	4.56
DAVI 41302M001	3	X XX	0.47	3.44	2.56
EBYP 41538M001	2	X X	1.13	0.44	2.39
ESMR 42011M001	3	X XX	1.50	1.41	4.34
ESQU 41533M001	4	XX X X	0.82	1.03	0.36

ETCG	40602M001	3	X XX	0.46	1.28	1.18
FLOR	41916S001	3	X XX	0.40	1.03	0.92
FQNE	41936S001	3	X XX	1.06	3.30	5.78
GCGT	80401M001	3	X XX	0.49	1.18	7.33
GLPS	42005M002	6	XXXXXX	1.26	4.36	3.08
GOJA	41654M001	3	XXX	0.69	0.53	1.95
GOLD	40405S031	3	X XX	1.20	1.71	2.19
GRE0	43501S001	3	X XX	1.15	0.85	1.36
GTK0	43602S007	3	X XX	1.08	2.28	0.90
GUAT	40901S001	3	X XX	0.22	0.69	0.60
GVAL	41623M001	2	X X	1.19	2.31	2.13
GYEC	42007M001	3	X XX	1.78	1.26	2.56
HER2	40522M001	3	X XX	0.90	0.33	0.68
ICAM	40514M002	2	XX	0.19	0.58	1.33
ICEP	40531M001	2	XX	0.58	1.35	1.06
IDGO	40532M001	2	XX	0.33	0.95	2.54
IGM1	41505M003	2	X X	0.53	1.06	2.01
IGN1	41303M001	3	X XX	0.17	2.30	3.29
ILHA	41634M001	3	X X X	0.35	0.74	5.00
IMBT	41638M001	3	XX X	0.58	0.99	1.57
IMPZ	41615M001	3	XXX	0.38	1.38	1.08
INEG	40507M001	3	X XX	0.24	1.14	2.27
IQQE	41708S002	6	XXXXXX	0.94	1.42	1.96
IQUI	42204M001	4	XXXX	0.93	1.11	4.86
JBAL	41537M001	2	X X	1.10	0.91	5.31
KOUR	97301M210	6	XXXXXX	0.62	1.66	5.87
LHCL	41518S001	3	XX X	1.29	0.39	2.56
LJEC	42010M001	3	XXX	1.22	1.68	1.97
LPAZ	40521M001	3	X XX	0.79	0.26	2.19
LPGS	41510M001	4	XX X X	0.61	0.32	1.15
MABA	41642M001	3	XXX	0.52	1.06	3.67
MANA	41201S001	6	XXXXXX	1.06	0.96	2.45
MAPA	41629M001	3	XXX	0.32	1.77	5.49
MARA	42402M001	4	X XXX	0.90	3.45	6.38
MCLA	41624M001	3	X XX	0.86	1.32	2.51
MDO1	40442M012	3	X XX	0.82	1.19	2.06
MERI	40520M001	3	X XX	0.39	0.81	1.36
MEXI	40519M001	2	XX	1.57	1.77	1.78
MGBH	41667M001	3	XX X	0.48	0.78	2.35
MGIN	41647M001	3	X XX	0.56	1.82	1.99
MGMC	41624M002	3	X X X	0.95	1.52	2.41
MGUB	41652M001	3	XX X	0.93	0.17	1.79
MPL2	41544M001	2	XX	0.48	0.47	2.12
MSCG	41649M001	3	XX X	0.34	0.53	3.53
MSDO	41672M001	3	XXX	0.61	1.66	3.80
MTBA	41663M001	3	XX X	0.37	0.56	1.08
MTCO	41670M001	3	XX X	0.75	1.20	3.14
MTSF	41655M001	3	XXX	0.52	1.43	3.63
MTY2	40518M001	3	X XX	0.74	0.38	0.35
MZAC	41503M001	4	XX X X	0.19	0.98	2.96
MZAE	41530M001	2	X X	0.72	0.92	0.85
MZAS	41528M001	2	X X	0.92	1.04	0.81
NAS0	43607S001	3	X XX	3.46	5.48	1.78
NAUS	41614M002	3	XXX	0.31	1.91	2.62
NEIA	41620M002	2	X X	0.68	1.35	4.27
OAX2	40517M001	3	X XX	0.11	1.04	0.44
OHI2	66008M005	4	XX X X	1.09	1.18	1.84

ONRJ	41635M001	3	XX	X	0.84	1.89	1.61	
OURI	41631M001	3	X	X	X	0.32	0.58	1.96
PALM	66005M002	4	XX	X	X	1.36	1.20	2.45
PBCG	41656M001	3	X	X	X	0.39	2.34	3.39
PEPE	41650M001	3		XX	X	0.60	0.48	2.81
PERA	41905S001	3		X	XX	1.48	1.79	2.26
PIE1	40456M001	3	X		XX	1.00	1.38	2.24
PISR	41673M001	3			XXX	0.86	2.61	2.28
PMB1	43702S001	3			XXX	0.67	1.16	5.44
POAL	41616M001	3	X	X	X	0.38	0.20	1.48
POLI	41630M001	3	X	X	X	0.87	0.94	2.59
POVE	41628M001	6	XXXXXX			0.67	1.59	2.38
PPTE	41611M002	3	X	X	X	0.23	1.34	2.17
PRGU	41671M001	3	X	X	X	0.21	0.81	2.92
PRMA	41674M001	3		XX	X	0.27	0.60	4.64
PSTO	41925S001	4		XX	XX	0.31	2.01	1.43
PTEC	42008M001	3	X		XX	1.52	1.39	2.75
RECF	41617M001	3			XXX	0.38	1.81	2.85
RIO2	41507M006	4	XX	X	X	1.70	0.90	5.04
RIOB	41645M001	3			XXX	1.26	1.10	1.38
RIOD	41608M001	3	X	X	X	0.34	1.36	2.08
RIOP	42006M001	6	XXXXXX			0.91	1.59	3.46
RJCG	41657M001	3	X		XX	0.53	1.93	2.42
RNMO	41664M001	3			XXX	1.29	3.58	2.46
RNNA	41668M001	3		XX	X	0.94	0.77	5.10
ROGM	41651M001	3		XX	X	0.77	0.94	2.61
ROJI	41658M001	3	XX	X		0.53	1.58	1.33
ROSA	41632M001	3	X	X	X	0.52	0.51	2.77
RWSN	41513M001	2	X		X	3.30	20.34	35.28
SAGA	41639M001	3			XXX	0.65	1.13	2.64
SALU	41640M001	4	X		XXX	1.49	3.49	5.02
SAMA	41928S001	3		X	XX	1.59	4.62	4.37
SANT	41705M003	6	XX	XXXX		0.79	1.00	2.34
SAVO	41643M001	3			XXX	0.43	1.34	3.32
SCCH	41659M001	3	X	X	X	0.44	0.42	2.32
SCLA	41660M001	3	X	X	X	0.41	0.25	1.42
SCRZ	41801M001	3	XX	X		0.49	1.93	2.41
SCUB	40701M001	5	XX		XXX	0.86	0.91	2.97
SJRP	41633M001	3	X	X	X	0.33	0.36	3.49
SL01	41543M001	2	X	X		0.77	0.92	1.79
SMAR	41621M001	3	X	X	X	0.43	0.70	1.41
SMRT	43102S001	3	X		XX	1.26	2.07	2.33
SRLP	41532M001	2	X	X		1.43	0.19	0.65
SRNW	43703M001	3			XXX	1.47	0.84	4.07
SRZN	43701S005	3	X	X	X	0.24	2.12	1.73
SSA1	41644M001	3	X	X	X	0.45	1.30	3.43
SSIA	41401S001	3	X		XX	0.33	0.93	2.05
SVIC	41536M001	2	X	X		0.31	0.21	0.79
TAMP	40516M001	2			XX	0.12	2.02	1.32
TERO	41531M001	2	X		X	0.23	0.49	1.84
TOGU	41661M001	3	X	X	X	0.76	0.23	3.29
TOL2	40515M001	3	X		XX	0.16	0.50	0.51
TOPL	41648M001	3			XXX	0.43	0.73	4.25
TUCU	41520S001	3	XX	X		0.56	0.70	2.46
TUNA	41930S001	3	X		XX	0.56	0.40	1.21
UBAT	41627M001	1		X		0.23	0.52	0.36
UBER	41625M001	2		XX		0.20	0.59	7.43

UCOR	41502M001	4	XX	X	X	0.43	0.53	1.34
UFPR	41610M002	3	X	X	X	0.30	1.14	1.73
UGTO	40528M001	2		XX		0.14	1.11	0.80
UNRO	41525M001	3	X	X	X	0.76	0.59	2.40
UNSA	41514M001	7	XXXXXXX			1.26	1.08	1.75
UNSJ	41527M001	3	X	X	X	0.29	1.04	0.95
URUS	41802M001	3	XX	X		0.61	2.69	1.91
USLP	40530M001	2		XX		0.18	1.48	0.91
UYMO	42301M001	4	XX	X	X	0.89	0.42	1.57
UYRO	42303M001	3	X	X	X	0.81	0.07	2.77
UYTA	42302M001	3	X	X	X	0.52	0.17	1.71
VALP	41712S001	3	XX	X		0.37	1.01	1.46
VARG	41626M001	1		X		0.19	0.56	0.08
VBCA	41512M001	4	XX	X	X	0.93	0.42	2.18
VESL	66009M001	3	XX	X		1.27	3.13	2.62
VICO	41613M001	3	X	X	X	0.77	1.92	1.56
VIL2	40527M001	2		XX		0.19	0.21	1.48
VIVI	41931S001	3		X	XX	0.73	1.96	1.80
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Total		565				0.87	1.99	3.41
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