

# Low elevation data, downweighting and mapping function positioning results

**ENVISAT: 4 series of 4 weeks (23/12/2007 – 19/01/2008)**

**serie 1: G&L MF; without data < 12°; with downweighting (routine series)**

**serie 2: G&L MF; with data < 12°; with downweighting**

**serie 3: G&L MF; with data < 12°; without downweighting**

**serie 4: GMF ; with data < 12°; without downweighting (\*)**

**(\*) SCRB, GAVB, LICB, MPSB give degraded results; excluded from comparisons**

Low elevation data < 12 dg	serie 1 = w/o data < 12 dg Vs serie 2 = with data < 12 deg
Downweighting law	serie 2 = with downw. Vs serie 3 = w/o downw.
Mapping function	serie 3 = Guo&Langley Vs serie 4 = GMF

# ENVISAT weekly solutions vs ITRF2005 RMS differences (mm)

solution | pts | avant | apres | date | rms flh avant mm | rms flh apres mm |

## serie 1: G&L MF; without data < 12°; with downweighting (routine series)

080302_080308MBE08a_McFPol	46	27.8	27.4	2008.17	23.7 35.2 22.7	23.6 34.8 22.1
080309_080315MBE08a_McFPol	47	27.3	26.8	2008.19	23.8 30.3 27.6	23.6 29.8 26.9
080316_080322MBE08a_McFPol	47	27.5	27.0	2008.21	27.1 27.5 27.8	26.6 27.2 27.2
080323_080329MBE08a_McFPol	47	28.2	27.7	2008.23	26.1 29.8 28.5	25.6 30.0 27.3

## serie 2: G&L MF; with data < 12°; with downweighting

080302_080308MBE08b_McFPol	46	25.8	25.2	2008.17	23.9 31.3 21.4	23.8 30.8 19.8
080309_080315MBE08b_McFPol	47	25.7	24.9	2008.19	23.7 28.5 24.9	23.4 27.9 23.2
080316_080322MBE08b_McFPol	47	25.3	24.6	2008.21	26.1 24.7 25.2	25.7 24.6 23.5
080323_080329MBE08b_McFPol	47	26.2	25.3	2008.23	25.6 27.7 25.3	25.1 27.7 23.0

## serie 3: G&L MF; with data < 12°; without downweighting

080302_080308MBE08c_McFPol	46	27.8	26.7	2008.17	26.2 31.5 25.4	26.2 31.0 22.2
080309_080315MBE08c_McFPol	47	27.6	26.2	2008.19	25.9 28.9 27.9	25.7 28.7 24.1
080316_080322MBE08c_McFPol	47	27.4	26.1	2008.21	27.3 24.6 30.0	27.2 24.5 26.5
080323_080329MBE08c_McFPol	47	28.6	27.3	2008.23	29.0 28.7 28.1	28.7 28.8 24.2

## serie 4: GMF ; with data < 12°; without downweighting

080302_080308MBE08e_McFPol	46	27.4	27.3	2008.17	25.7 31.4 24.8	25.8 30.9 24.7
080309_080315MBE08e_McFPol	47	27.9	27.1	2008.19	26.8 30.9 25.7	26.6 30.6 23.8
080316_080322MBE08e_McFPol	47	27.8	27.1	2008.21	27.3 27.8 28.3	27.0 27.6 26.8
080323_080329MBE08e_McFPol	47	28.6	28.1	2008.23	29.1 28.7 28.1	28.9 28.6 26.8

# ENVISAT weekly solutions vs ITRF2005 7 parameters

SOLUTION T (mm) FE(1e-9) R(mas) TX TY TZ FE RX RY RZ date

## serie 1: G&L MF; without data < 12°; with downweighting (routine series)

080302_080308MBE08a_MCFPol	0.92	-2.42	0.79	0.35	0.01	-0.04	0.02	2008.17
080309_080315MBE08a_MCFPol	1.72	-4.39	-0.35	0.25	0.01	-0.01	0.01	2008.19
080316_080322MBE08a_MCFPol	4.39	-2.56	0.53	0.24	-0.02	-0.02	-0.10	2008.21
080323_080329MBE08a_MCFPol	3.74	-2.55	0.25	0.38	0.02	-0.05	-0.02	2008.23

## serie 2: G&L MF; with data < 12°; with downweighting

080302_080308MBE08b_MCFPol	1.46	-3.04	0.72	0.71	0.03	-0.05	0.06	2008.17
080309_080315MBE08b_MCFPol	2.04	-4.04	-0.37	0.55	0.02	-0.03	0.01	2008.19
080316_080322MBE08b_MCFPol	4.27	-2.09	0.49	0.60	0.00	-0.01	-0.05	2008.21
080323_080329MBE08b_MCFPol	4.08	-2.33	-0.12	0.71	0.03	-0.05	-0.01	2008.23

## serie 3: G&L MF; with data < 12°; without downweighting

080302_080308MBE08c_MCFPol	1.16	-3.41	0.10	1.37	0.05	-0.06	0.12	2008.17
080309_080315MBE08c_MCFPol	0.97	-4.07	-0.90	1.26	0.03	-0.05	0.00	2008.19
080316_080322MBE08c_MCFPol	3.47	-1.77	0.08	1.27	0.03	0.01	0.01	2008.21
080323_080329MBE08c_MCFPol	3.72	-2.14	-0.96	1.40	0.03	-0.06	0.01	2008.23

## serie 4: GMF ; with data < 12°; without downweighting

080302_080308MBE08e_MCFPol	2.68	-2.46	0.43	1.36	0.06	-0.07	0.01	2008.17
080309_080315MBE08e_MCFPol	2.11	-2.99	0.17	1.22	0.05	-0.05	-0.08	2008.19
080316_080322MBE08e_MCFPol	4.11	-1.66	0.81	1.38	0.03	0.00	-0.05	2008.21
080323_080329MBE08e_MCFPol	5.16	-1.67	-0.35	1.46	0.03	-0.06	-0.08	2008.23