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# Centro Experimental de Procesamiento CPLAT y ASOCIADOS

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*SIRGAS*

*Montevideo, Mayo 2008*




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# CPLAT y ASOCIADOS

- \* Fac. de Ciencias Astronómicas y Geofísicas-UNLP
- \* Fac. de Ingeniería- UN de Cuyo
- \* Unidad de Aplicaciones Geodésicas y Gravimétricas-IANIGLA-CONICET

1395		1399	1400			1428	1429		1442	1443		1465
Universida de La Plata Solutions												
Training							Pilot experience			CIMA Solutions		



# Processed network by CPLAT / CIMA



**17 New stations: ANTC, AUTF, BOMJ, LHCL, MECO, MZAS, NAUS, ONRJ, PARC, PMB1, POCI, RIOP, RIO2, SRNW, SRZN, SSIA, UNSJ.**

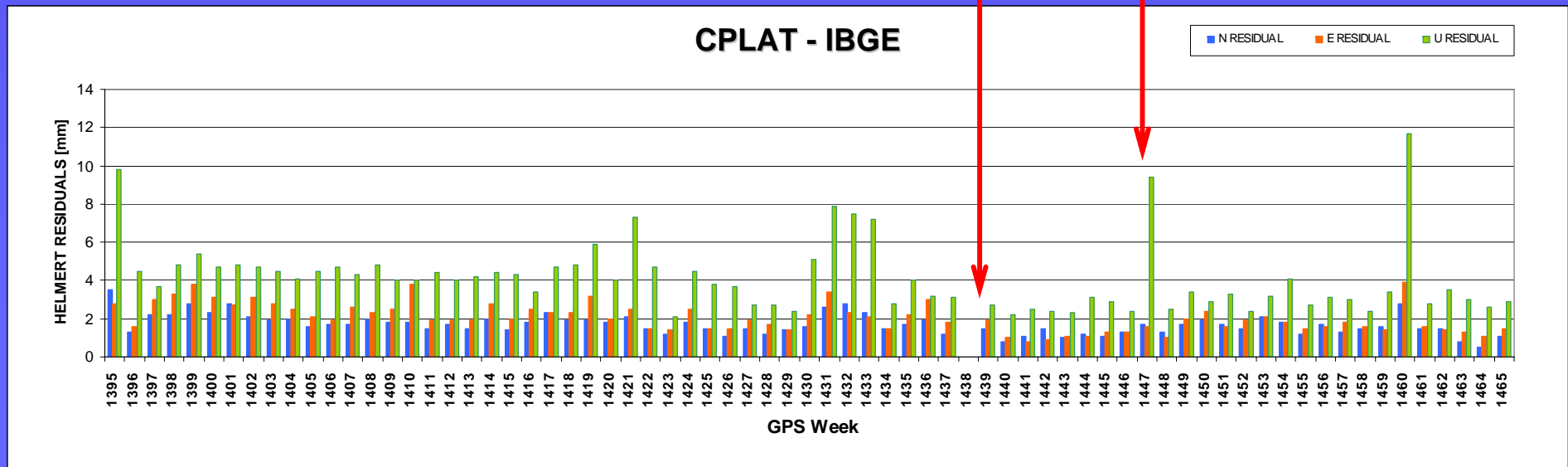
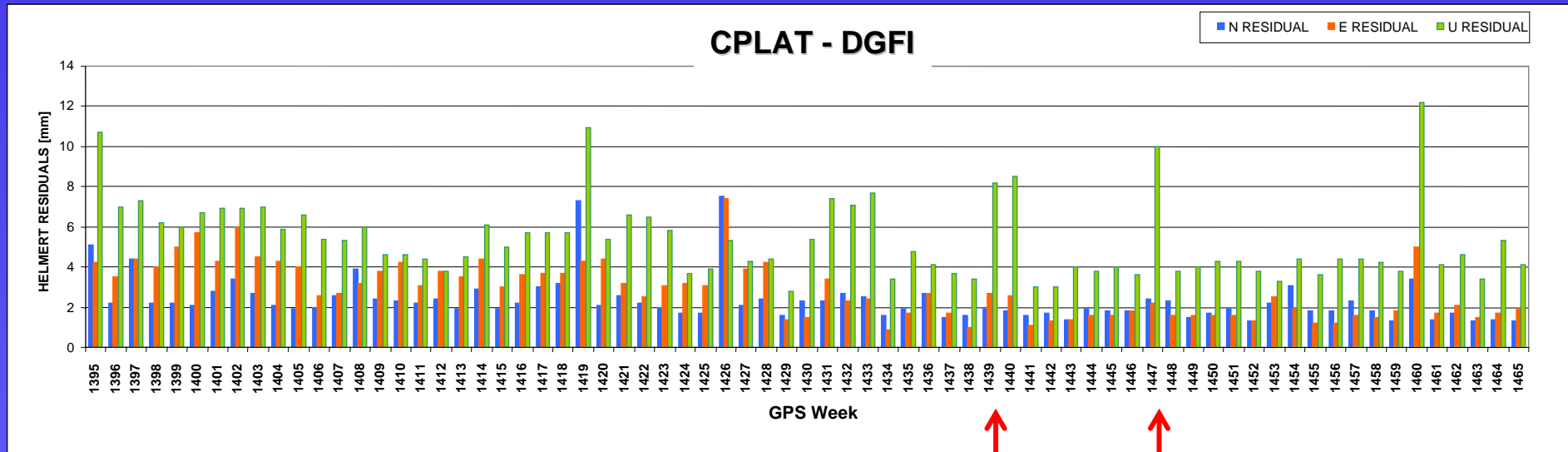
**+2 Arg. +5 Braz + 4 Urug**

# Main characteristics of CPLat processing

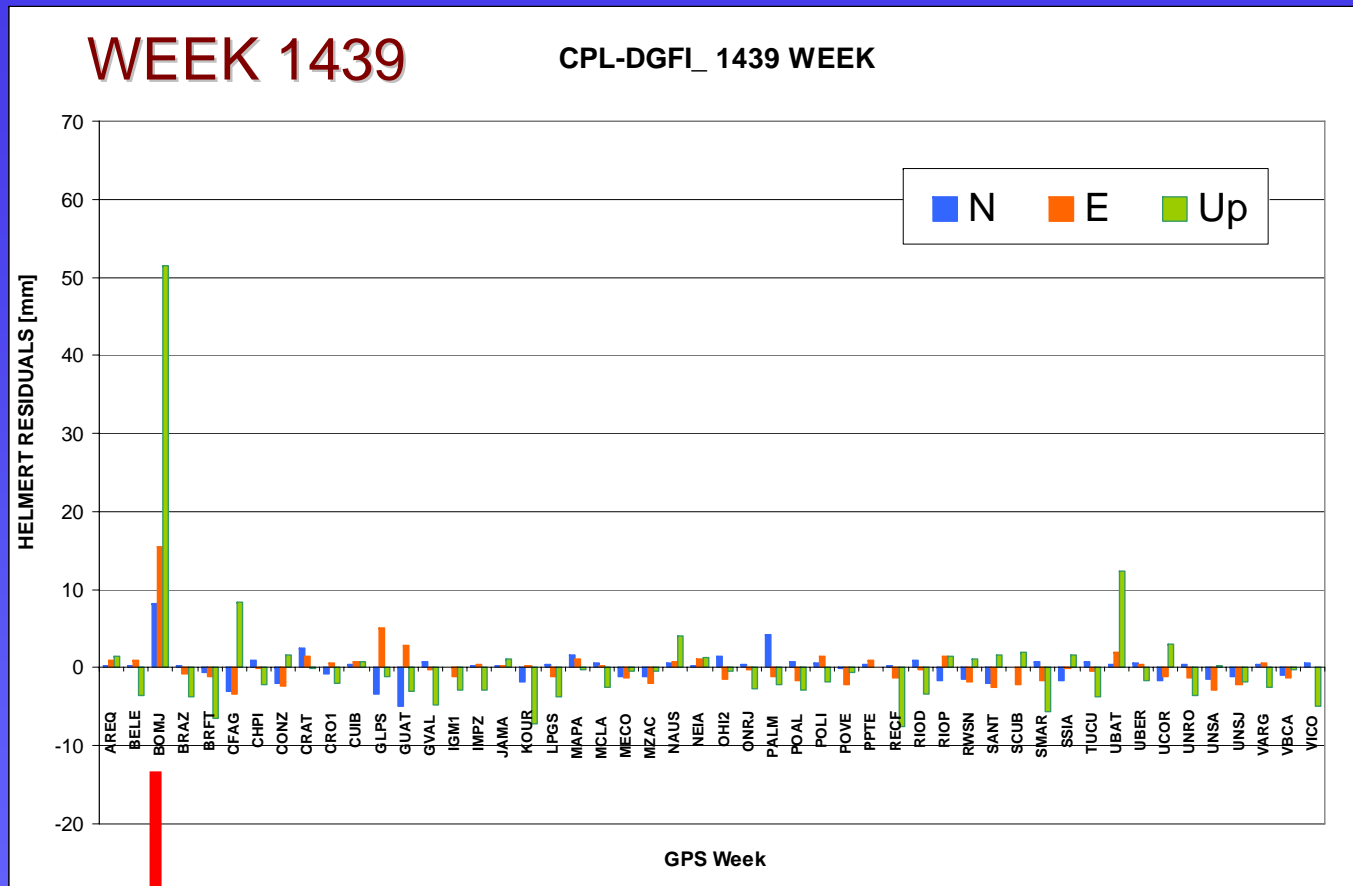
Week	1281 until 1399	1400 until 1442 (CPLAT)	after 1443 (CPLAT / CIMA)
Number of Stations	21	60	58
Observations	Double differenced	Double differenced	Double differenced
Software used	Bernese 5.0 ( BPE mode)	Bernese 5.0 ( BPE mode)	Bernese 5.0 ( BPE mode)
Sampling rate	30 sec	30 sec	30 sec
Elevation cutoff	05°	<b>03°</b>	03°
Baselines strategy	SHORTEST	<b>MAX-OBS</b>	MAX-OBS
Observations weighting	NO	<b>cos Z</b>	cos Z
Orbits/EOP	IGS final - ITRF2000/IGb00 EOP week	<b>IGS final - IGS05 EOP week</b>	IGS final - IGS05 EOP week
A priori Troposphere model	Niell dry component	Niell dry component	Niell dry component
Troposphere	Zenith delay estimated each 2 hours (12 daily corrections p/station) A priori sigmas applied with respect to prediction model Niell (wet component) -first parameter +/- 5 m absolute and +/- 5 cm relative	Zenith delay estimated each 2 hours (12 daily corrections p/station) A priori sigmas applied with respect to prediction model Niell (wet component) -first parameter +/- 5 m absolute and +/- 5 cm relative	Zenith delay estimated each 2 hours (12 daily corrections p/station) A priori sigmas applied with respect to prediction model Niell (wet component) -first parameter +/- 5 m absolute and <b>+/- 10 cm relative</b>
Ambiguities	QIF strategy, no ionosphere model applied	QIF strategy, no ionosphere model applied	QIF strategy, no ionosphere model applied
Ocean tide model	GOT00.2 and FES95.5	GOT00.2 and FES95.5	<b>FES2004</b>
Phase center variation	Relative	<b>Absolute (IGS_05)</b>	Absolute (IGS_05)
Coordinates and velocities	(DGFI)05P01	IGS05_R	IGS05_R
Daily solution	NEQ files, free network solution (s=±1m)	NEQ files, free network solution (s=±1m)	NEQ files, free network solution (s=±1m)
Week solution	SINEX files Free network solution (s=±1m)	SINEX files Free network solution (s=±1m)	SINEX files Free network solution (s=±1m)

# EPC COMPARISON

RMS residuals after Helmert transformation between free solutions

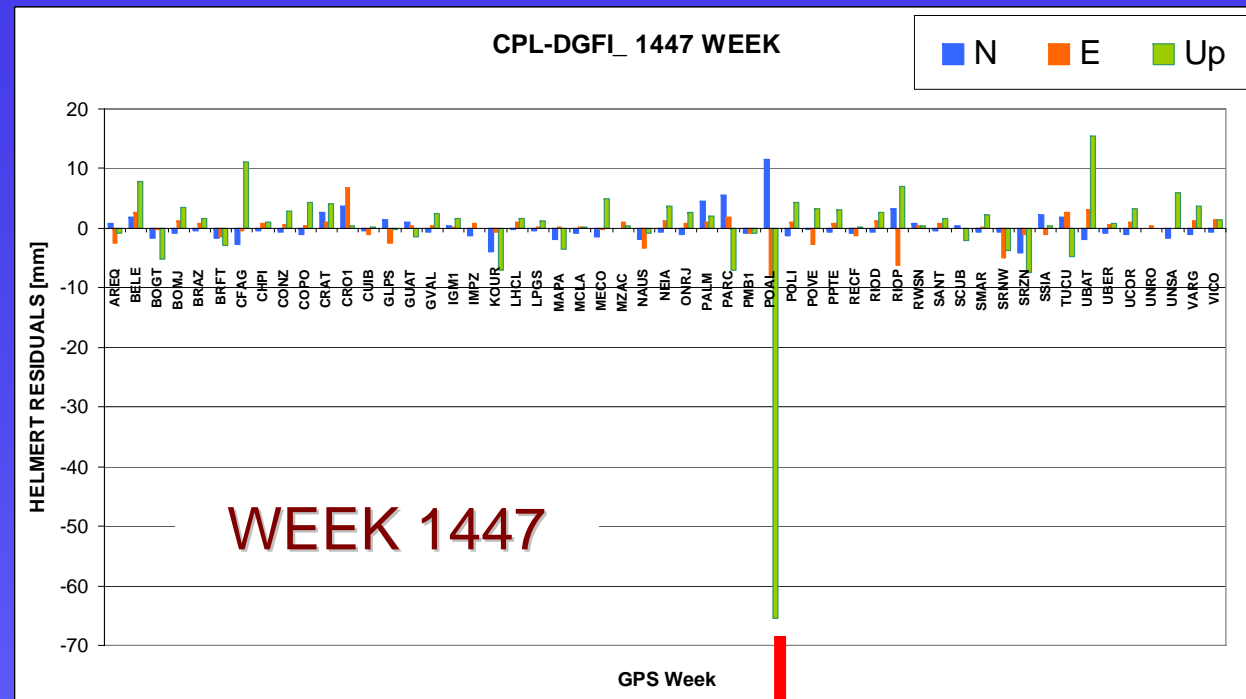


# OUTLIERS between the weekly solution CPLAT - DGFI



<b>BOMJ</b>					
CPLAT (sinex <b>1439</b> )			DGFI (sinex <b>1439</b> )		
receiver	antenna	radome	receiver	antenna	radome
TRIMBLE 4000SSI	TRM29659.00	NONE	<b>TRIMBLE NETRS</b>	<b>TRM55971.00</b>	<b>NONE</b>

# OUTLIERS between the weekly solution CPLAT - DGFI



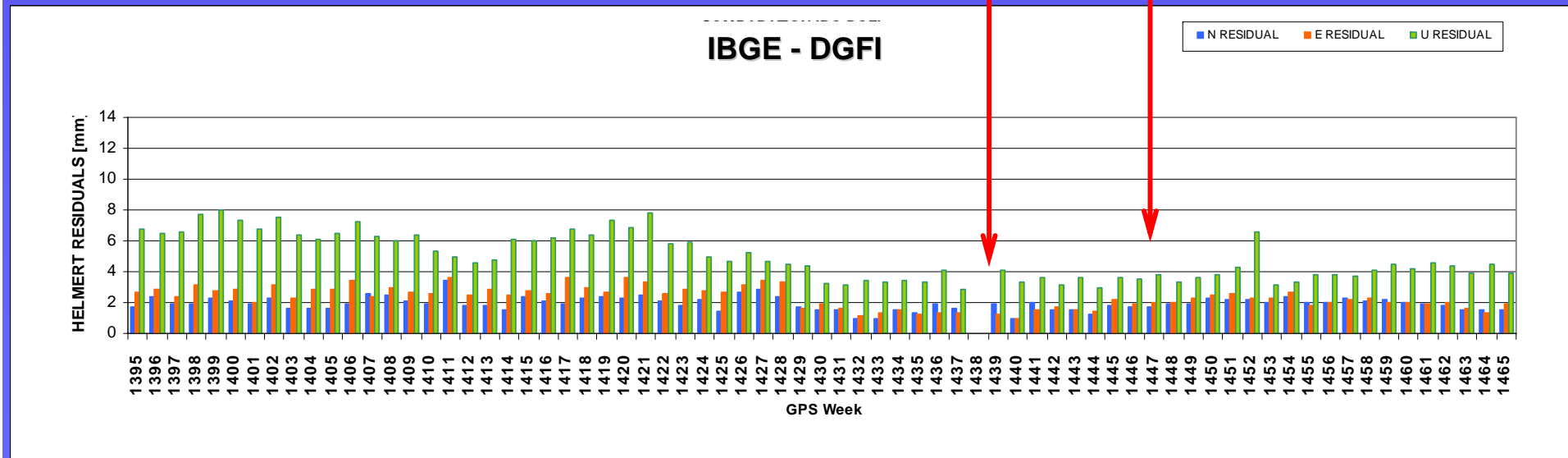
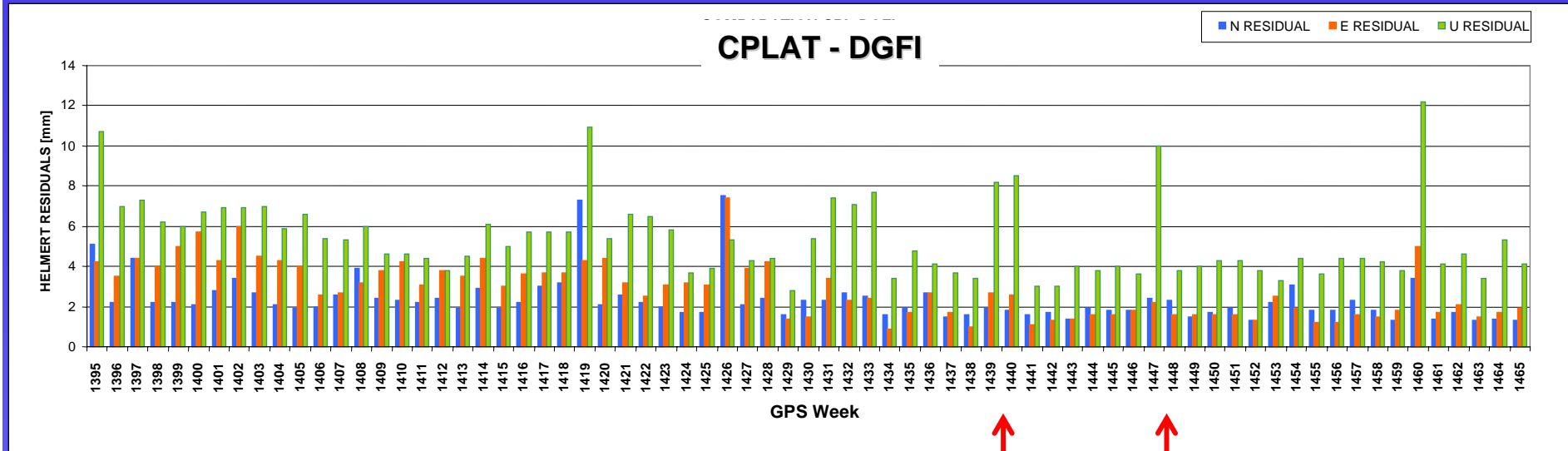
## POAL

CPLAT (sinex 1447)			DGFI (sinex 1447)		
receiver	antenna	radome	receiver	antenna	radome
TRIMBLE NETRS	TRM55971.00	NONE	TRIMBLE NETRS	TRM29659.00	NONE

POAL LOG FILE					
receiver	antenna		CAMBIO	antenna	
TRIMBLE NETRS	TRM55971.00	NONE	1444	TRM29659.00	NONE

# EPC COMPARISON

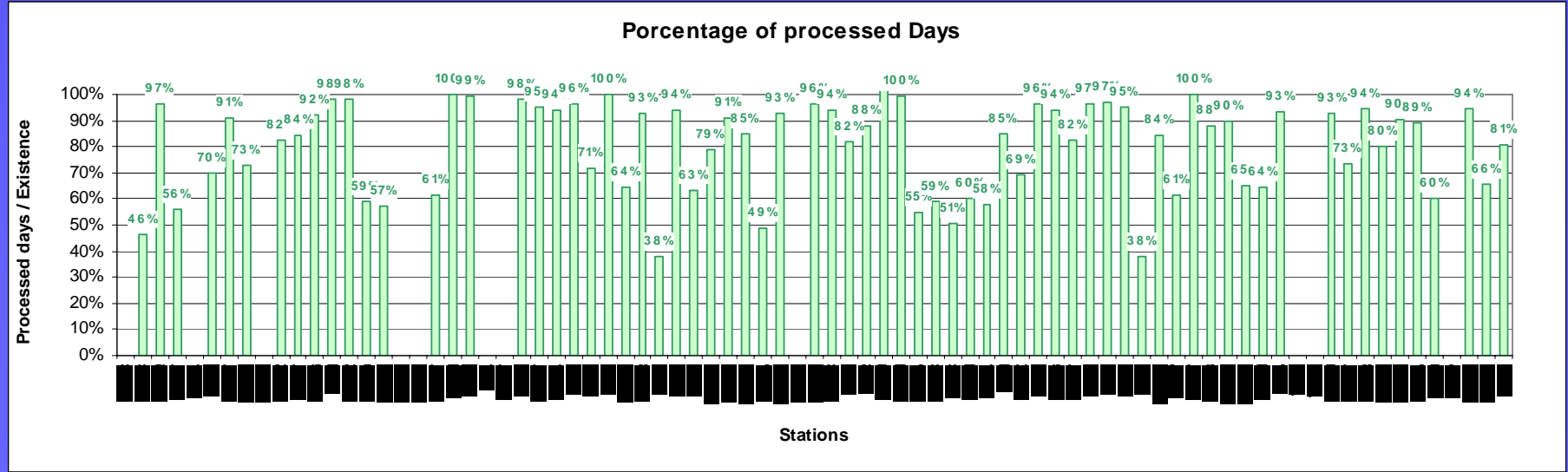
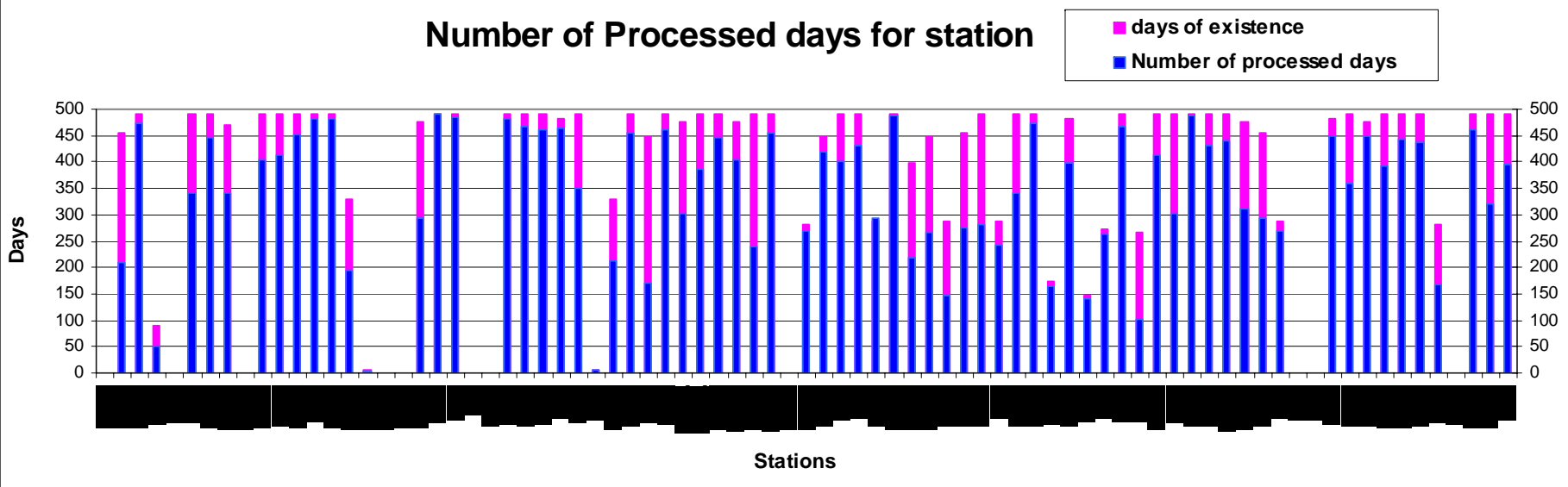
RMS residuals after Helmert transformation between free solutions



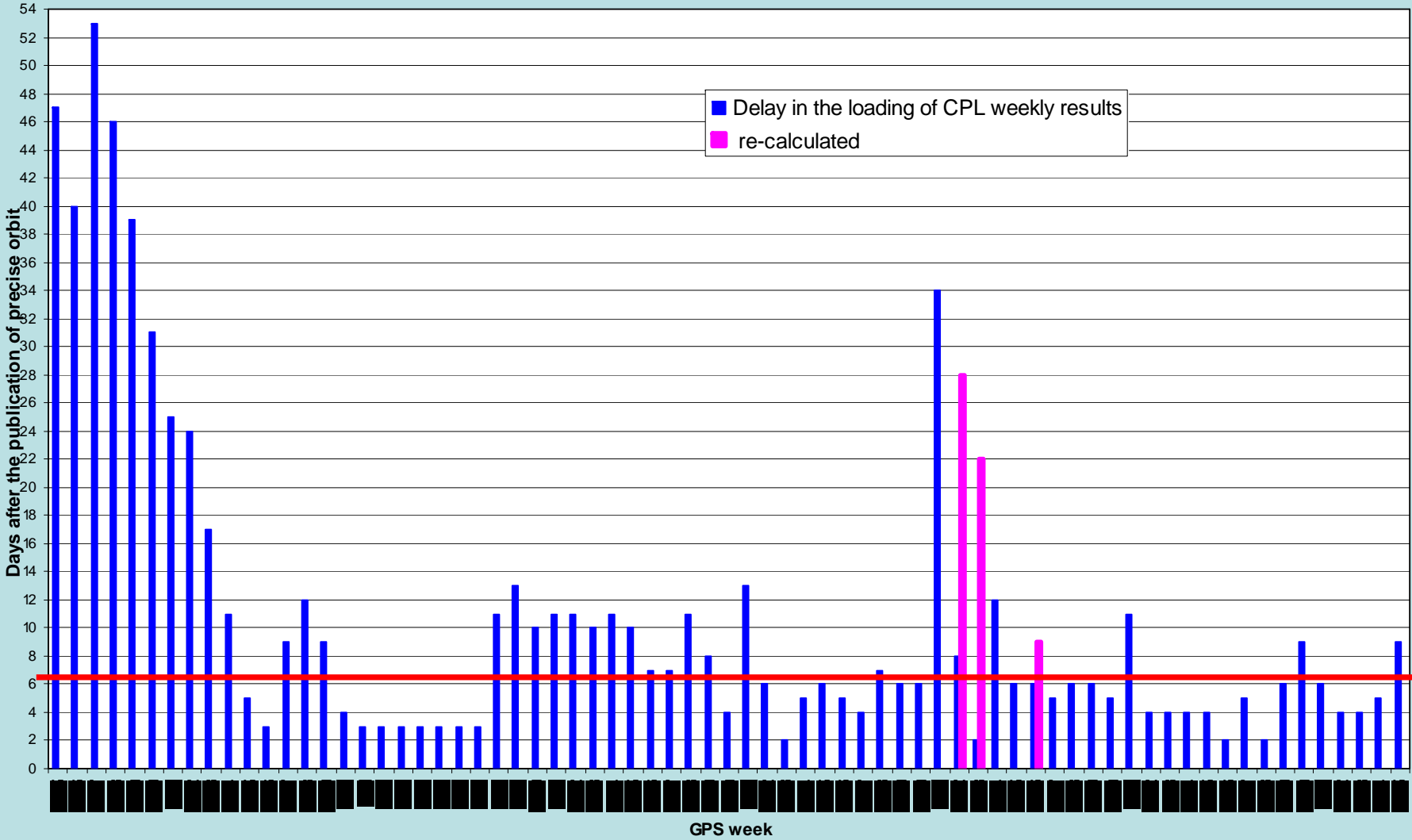




# Days processed for each station



# Delay in the loading of CPL weekly results





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## Difficulties found in the CIMA processing

### Incorporation of new stations

- Delays in the load of the log file.
- Erroneous information in the heather.
- Different criteria of incorporation.
- Not good communication with SIRGAS.

### Difficulties to accede to the servers of information

- RAMSAC feb/2008
- Server of Uruguay



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# Future activities

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- To check and to put in functioning again PDES and MPLA
- To install and to proceed in SIRGAS with the incorporation of new stations (Rio Gallegos and Bariloche)
- To continue with SIRGAS's processing as official Center of processing. "CIMA"
- To continue studying and analyzing the strategy of combination of solutions

*A formal invitation from SIRGAS to the Fac. de Ingeniería. UNCuyo to become an oficial processing center will be certainly aprecaited*



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# Muchas gracias !!!



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## CIMA

### Centre of processing Ingeniería-Mendoza-Argentina



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