



Accuracy and Availability of EGNOS - Results of Observations

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Accuracy and Availability of EGNOS - Results of Observations

PECS project No 98097

Formal Model of Availability of EGNOS
Measurements with Defined Level
of Accuracy



OUTLINE OF PRESENTATION

1. **Task**
2. Cooperation
3. Measurements
4. Accuracy and availability - results
5. Notices and future plans

Task

To elaborate the mathematical model
and, consequently, the software
which gives the possibility to forecast
and estimate in probabilistic categories
the accuracy EGNOS service
during the specified time



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Cooperation

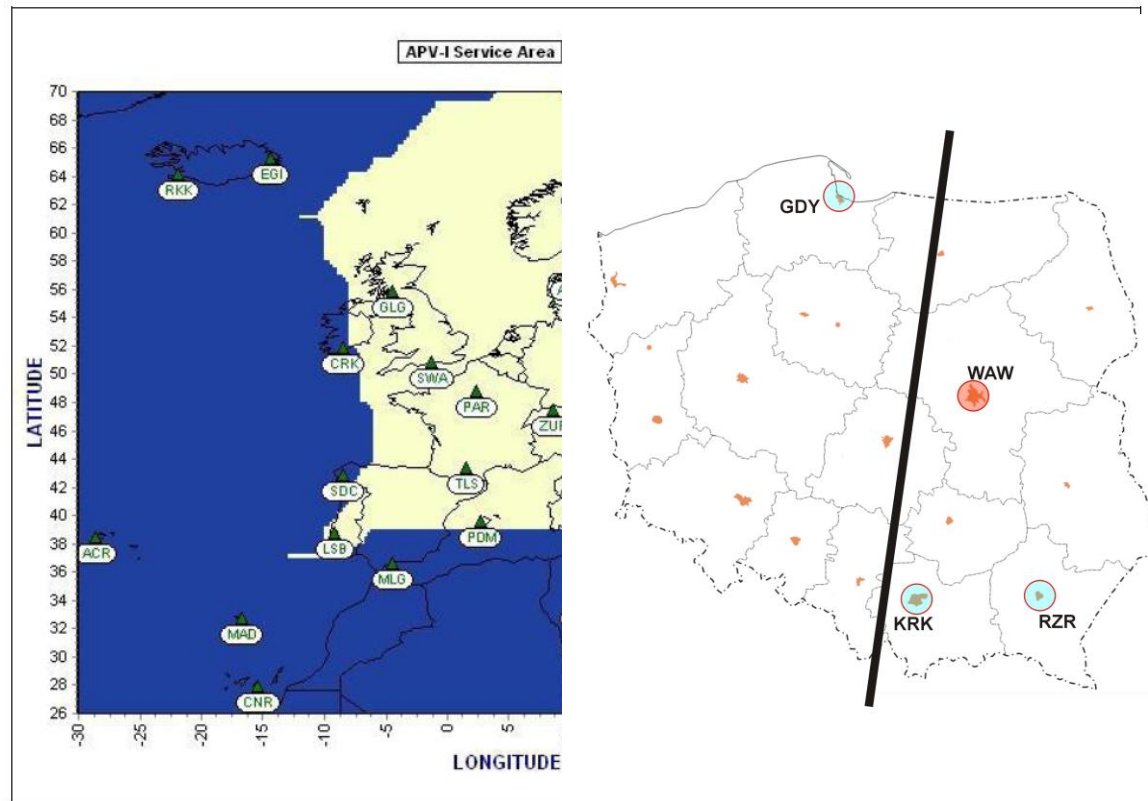
- Polish Air Navigation Services Agency - Mr Zakrzewski
- Hydrographic Office of the Polish Navy
- Prague TU (Czech) team – prof. Vejražka
- Sofia TU (Bulgaria) team – Mr Vasiliev



OUTLINE OF PRESENTATION

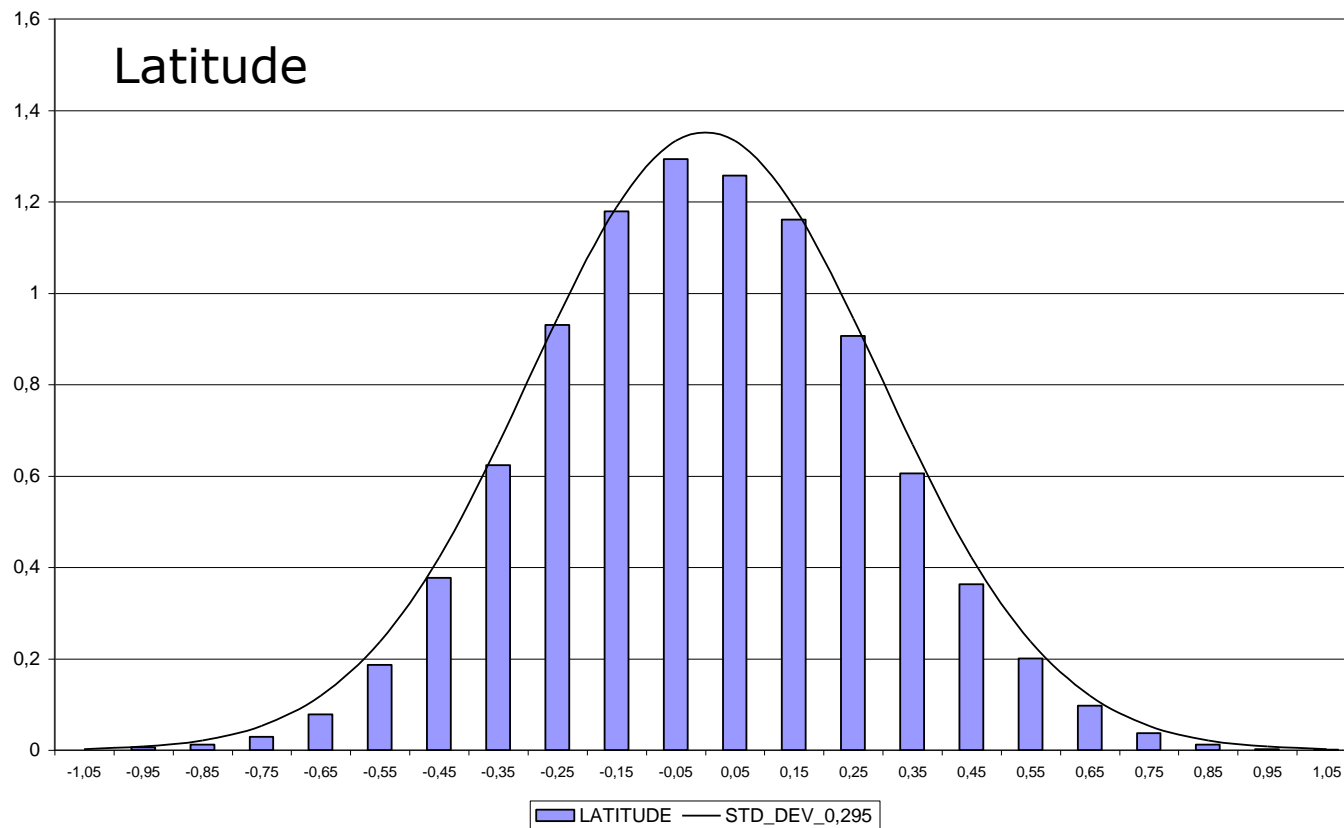
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Measurements

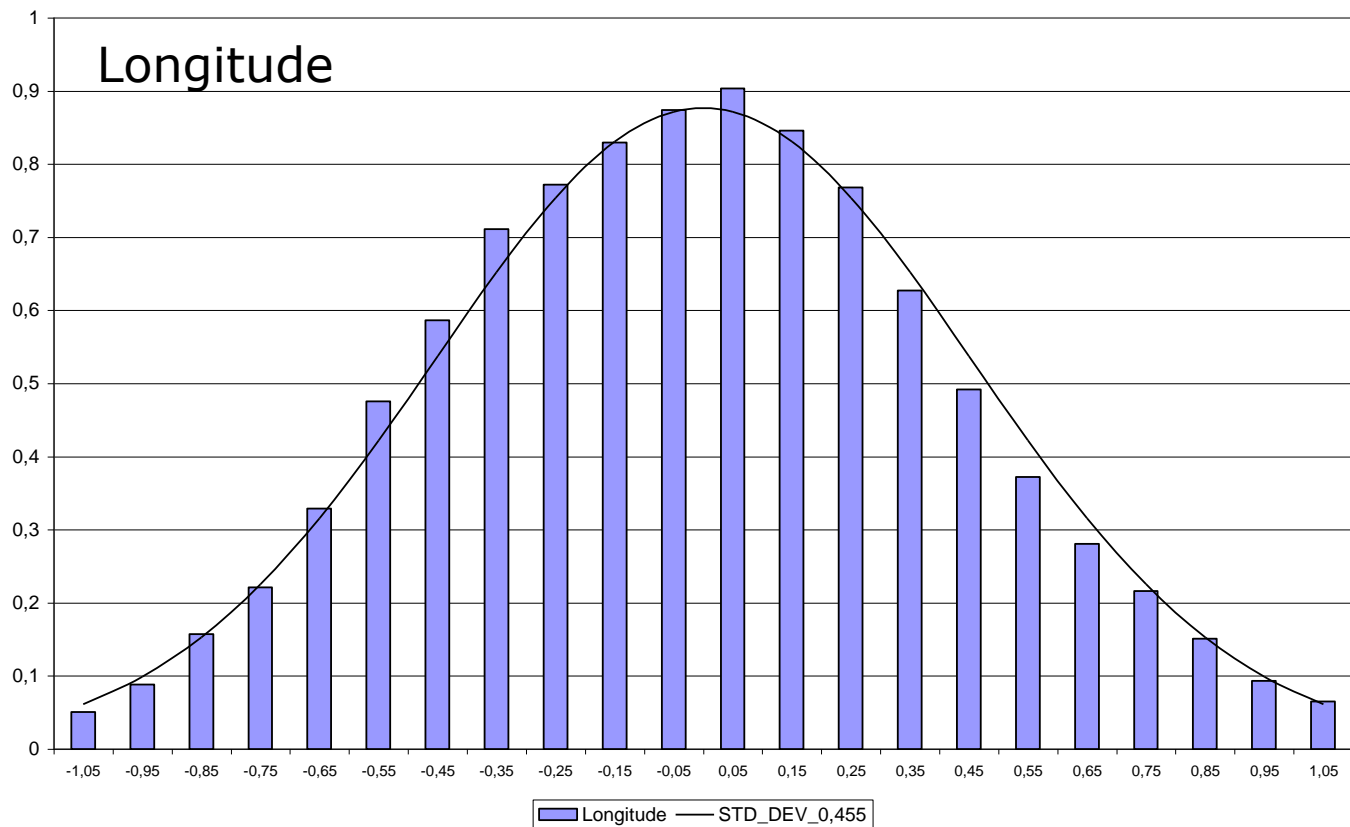


ESSP-DIL51 (14.06.2010)

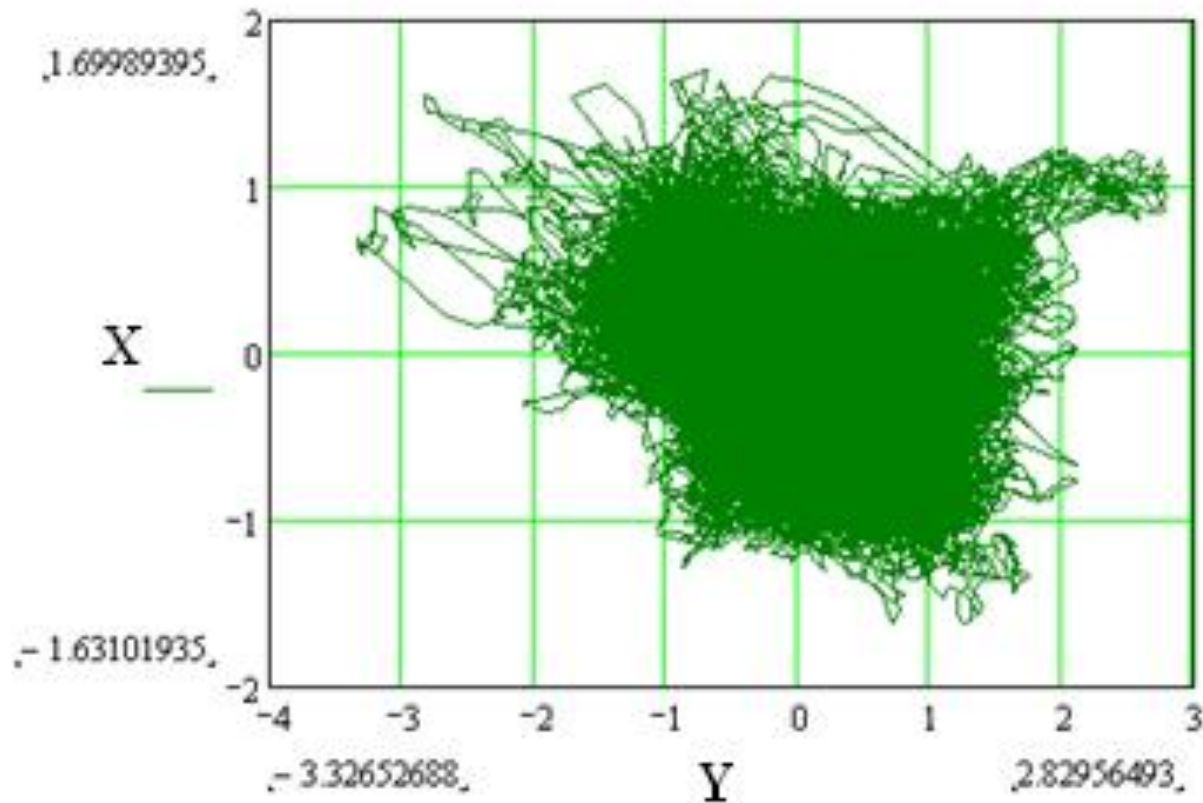
Results



Results



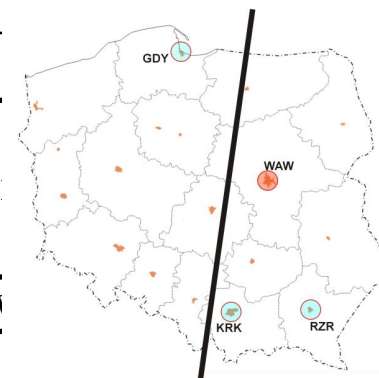
Results



Fixes: 1.500.000-1.999.999 Rzeszów August 2010

Results

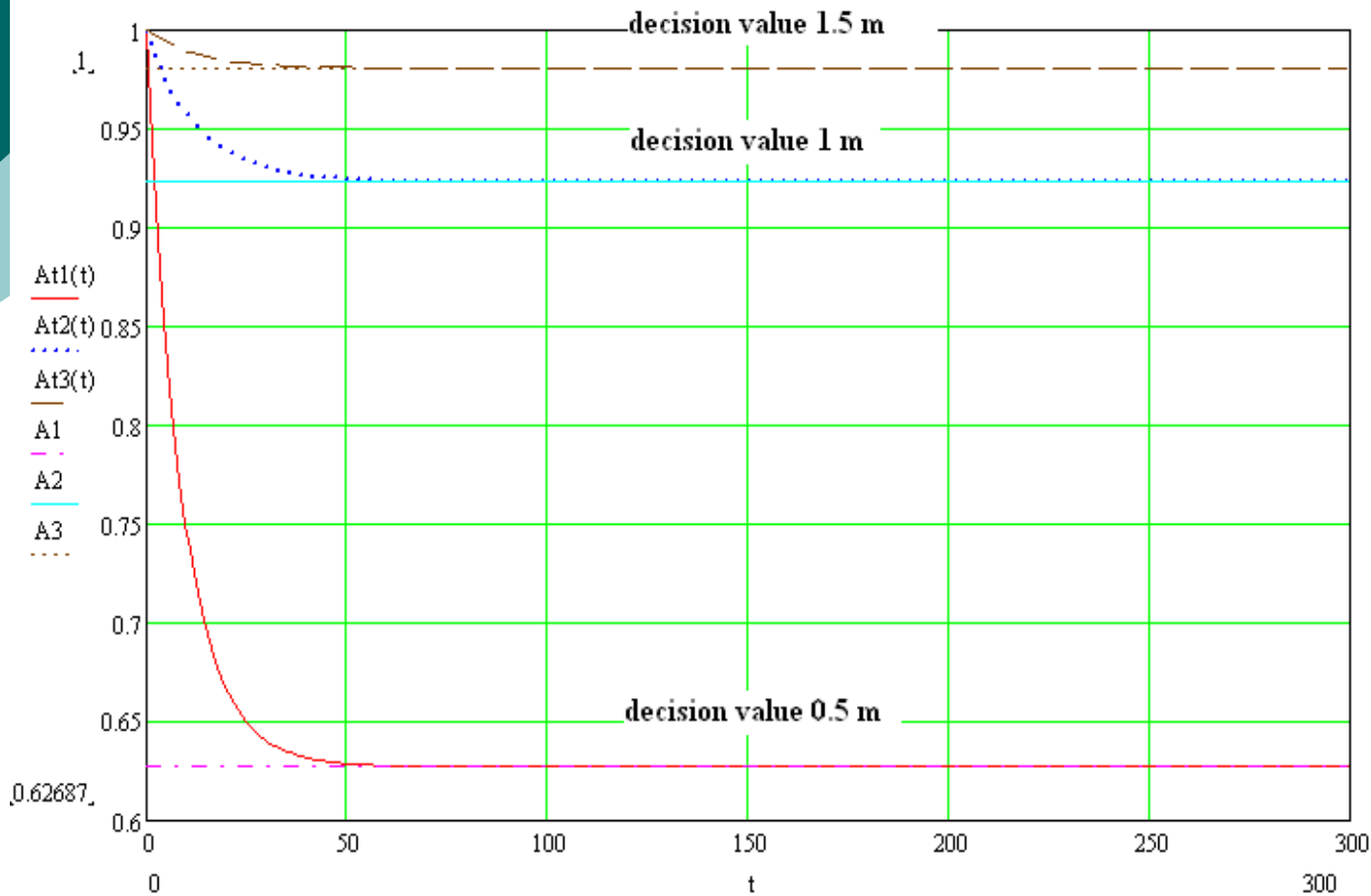
	NPA		APV I		APV II		CAT	
	HOR	VERT	HOR	VERT	HOR	VERT	HOR	VERT
Required Accuracy [m]	220	-----	16	20	16	8	16	16



	Mean errors in (m)	
	Horizontal	Vertical
Warszawa	1.52	1.50
Kraków	0.82	1.32
Rzeszów	0.96	1.49
Gdynia	1.4	*

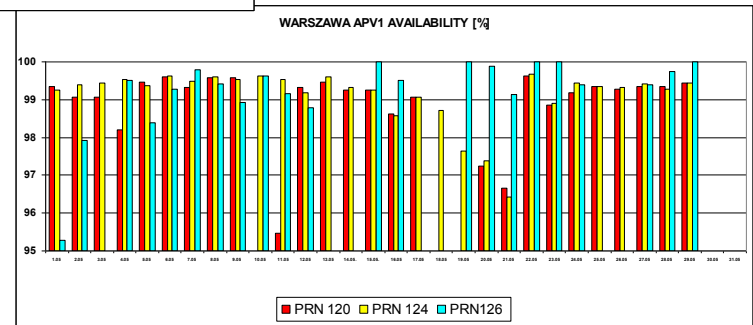
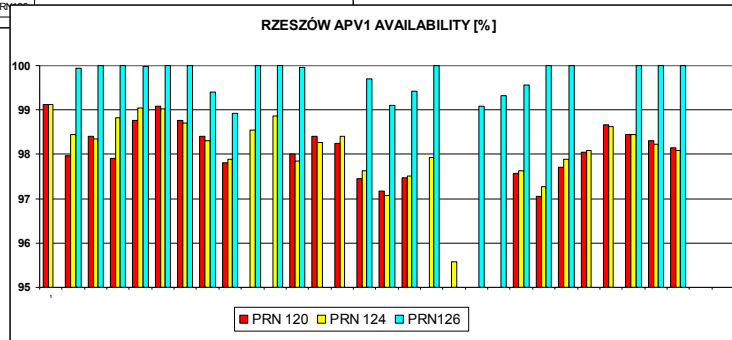
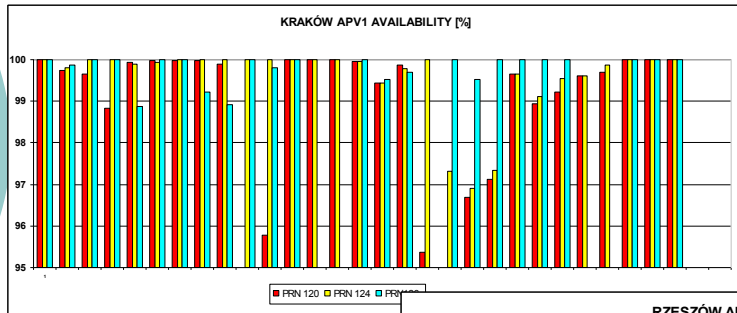
Results

AVAILABILITY



Limit	Availability
0.5 m	62.68705 %
1 m	92.2591 %
1.5 m	98.0404 %
2 m	99.5584 %
3 m	99.9838 %
4 m	99.9976 %

Results



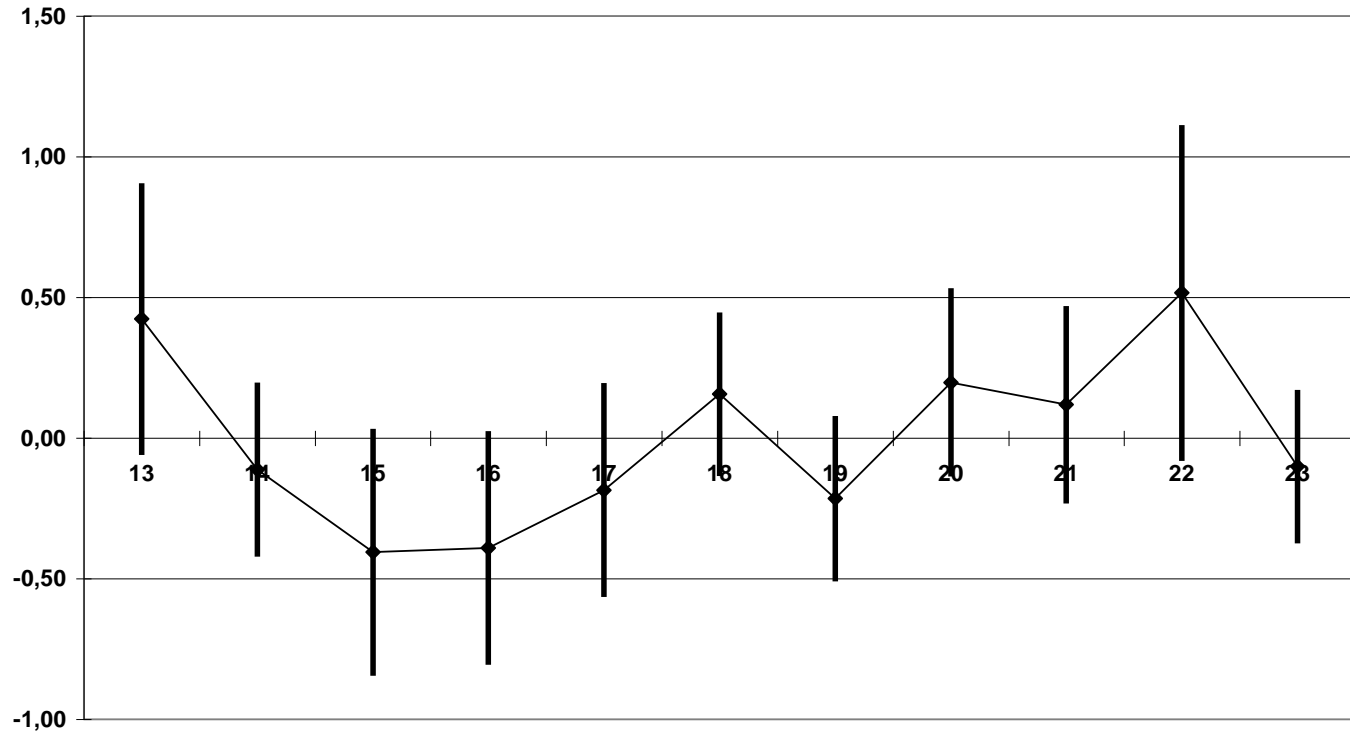
Notices and future plans

Correlations

	RZR 120	RZR 124	RZR 126	KRK 120	KRK 124	KRK 126	WAW 120	WAW 124	WAW 126
RZR120	1,00	0,80	-0,09	0,45	0,70	-0,07	0,44	0,84	-0,08
RZR124		1,00	-0,10	0,37	0,90	-0,12	0,30	0,91	-0,09
RZR126			1,00	0,05	0,07	0,43	0,02	0,04	0,23
KRK120				1,00	0,54	0,03	0,98	0,50	-0,06
KRK124					1,00	-0,13	0,44	0,91	-0,14
KRK126						1,00	0,07	-0,08	0,62
WAW120							1,00	0,46	0,01
WAW124								1,00	-0,04
WAW126									1,00

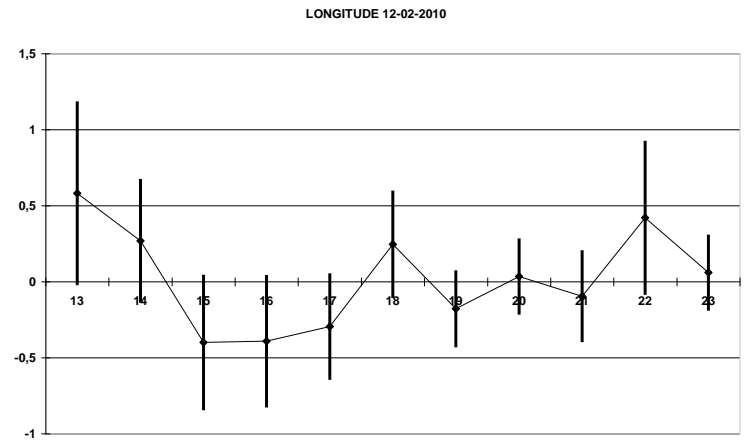
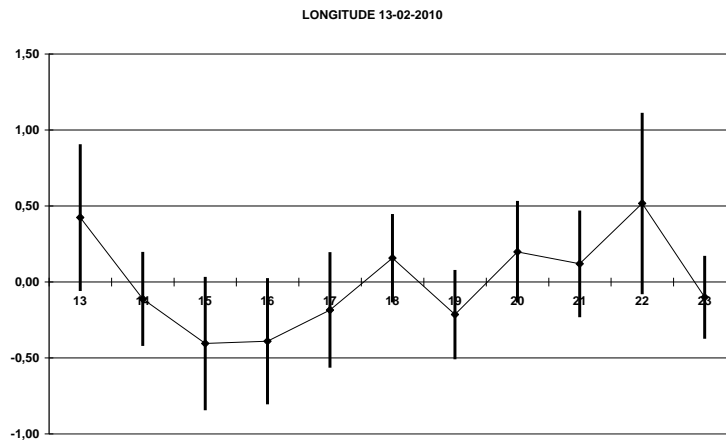
Notices and future plans

LONGITUDE 13-02-2010

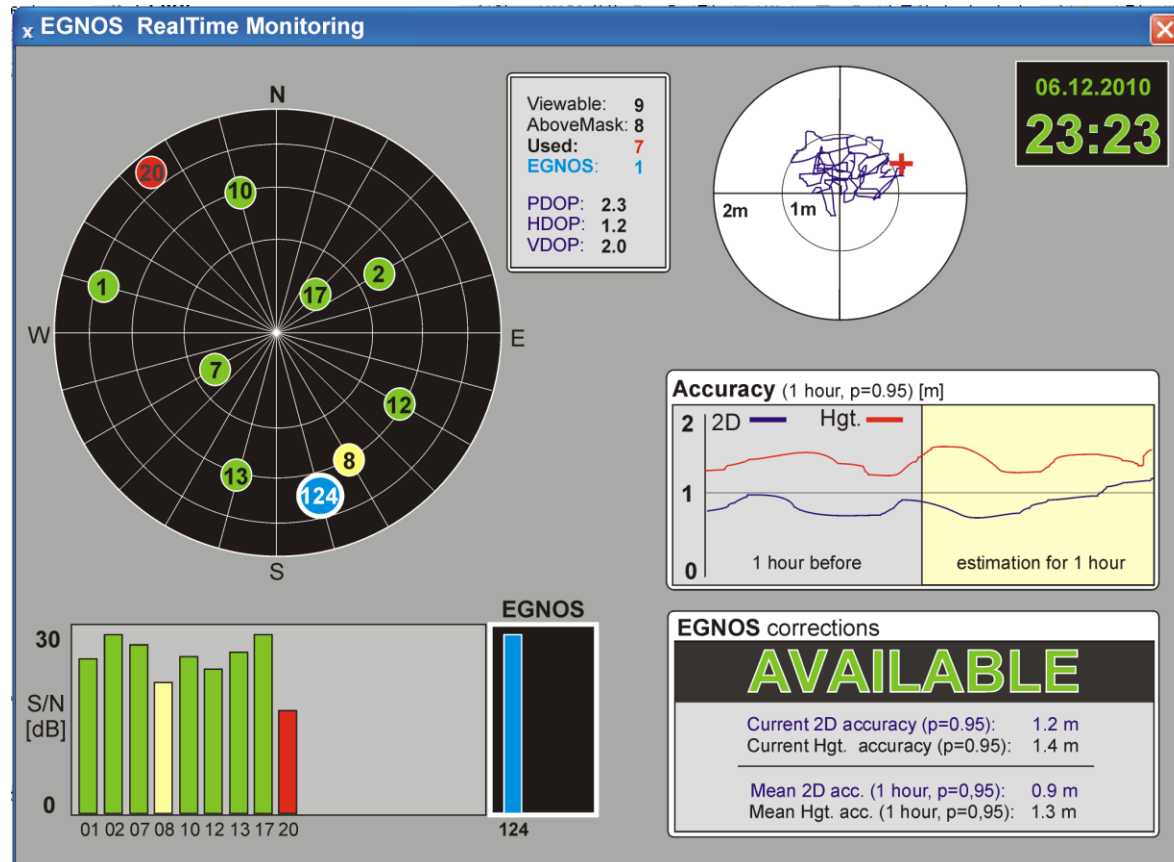


Gdynia
Novatel
OEMV

Notices and future plans



Notices and future plans



Notices and future plans

1. Mathematical models of availability and reliability became made
2. Lack of correlation between availability of corrections – necessity in local monitoring
3. Model of availability, reliability and correlation of day to day errors – possibility for forecasting



Thank you for
the attention