

EPN TIME SERIES ANALYSIS

REPORT

PREPARED TO THE EPN LAC WORKSHOP
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FÖMI SATELLITE GEODETIC OBSERVATORY

STATUS CHANGE - 2008

**SPECIAL PROJECT (2001-2008) □
(scientific freedom) □**

TO

**ROUTINE SERVICE (2008-) □
(commitment and reliability) □**

FORMAL CHANGES

WEB pages UPDATE

- MORE TRANSPARENT AND SIMPLER
- EASIER NAVIGATION TO THE PRODUCTS
- CHANGES IN THE PRODUCT PORTFOLIO
 - More weights on reference frame maintenance
 - **Offset and outlier database no more supported**
 - Power spectral density plots will be added

CHANGES IN THE BASICS

- **MORE EMPHASIS ON REFERENCE FRAME**
 - ITRF2005 regional densification, maintenance
 - Overview of regional datum realization
 - More 'ITRF-friendly' approach
- **SOPHISTICATED HARMONIC ANALYSIS**
 - Lomb-Scargle periodograms
 - Analysis of the seasonal periodicity
 - Preparations for handling the reprocessing

PRODUCTS

- EPN CUMULATIVE SOLUTION

- CATREF software, Minimum Constraint
- REGULARLY UPDATED (4 per year)□
- EPN_DISCONTINUITY.SNX table maintenance
- **Up-to-date** coordinate and velocity solutions
ITRF2005; ETRF2000(R05)□
- Residual coordinate time series

- BY-PRODUCTS

- Used for further analysis (geophysics)□

BY- and ADD-ON products

- Helmert-transformation parameters
- WRMS plots
- HARMONIC AND NOISE ANALYSIS
 - De-trended time series with annual term
 - Lomb-Scargle periodograms
- EPN PILOT RE-ANALYSIS

PLEASE VISIT THE EPNCB WEBSITE
FOR DETAILS!