WP4. Scientific Combination Service
Pre-processing for Combination

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Introduction

- In **WP4** at **Univeristy of Bern**
  - Scientific Combination Service:

    Combination of GRACE Monthly Gravity Field Solutions

- Contents
  - **Pre-processing (1): Signal and Noise Assessment**
  - **Pre-processing (2): Weights for Combination**

GRACE Monthly Gravity Field Solutions (L2)
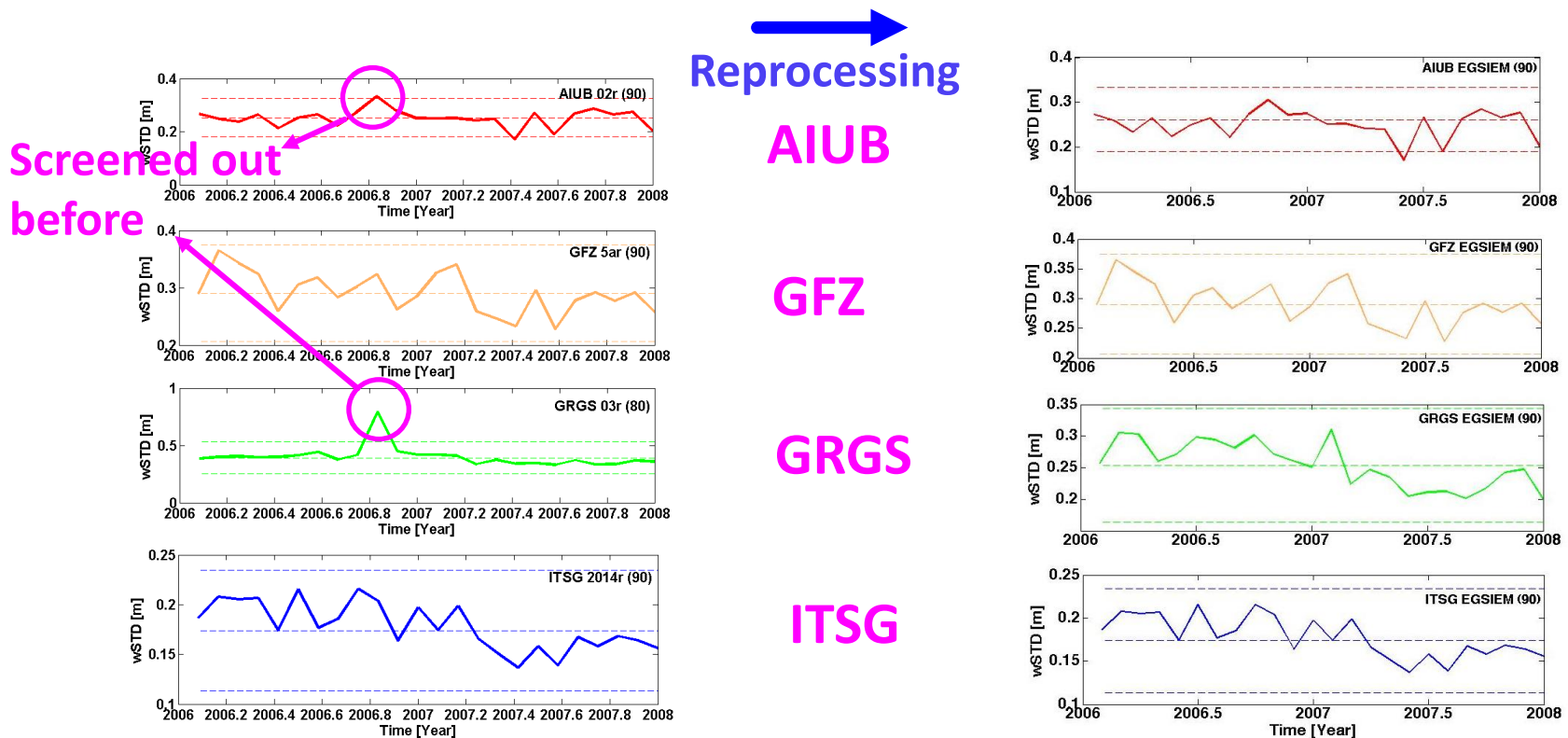## refered to the *EGSIEM Processing Standard*:

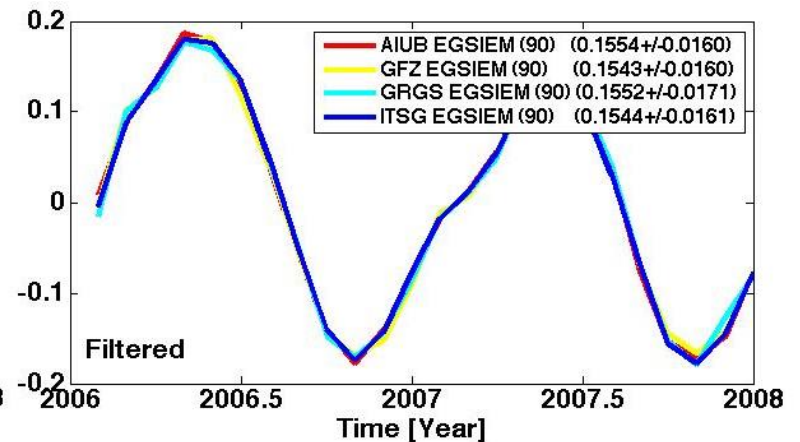| Analysis Center	Max. Degree	Period
AIUB	90 (Reprocessed)	**2006/01 – 2007/12 (2 years)**
GFZ	90	
GRGS	*80 → 90*	
ITSG	90	

FTP Server:
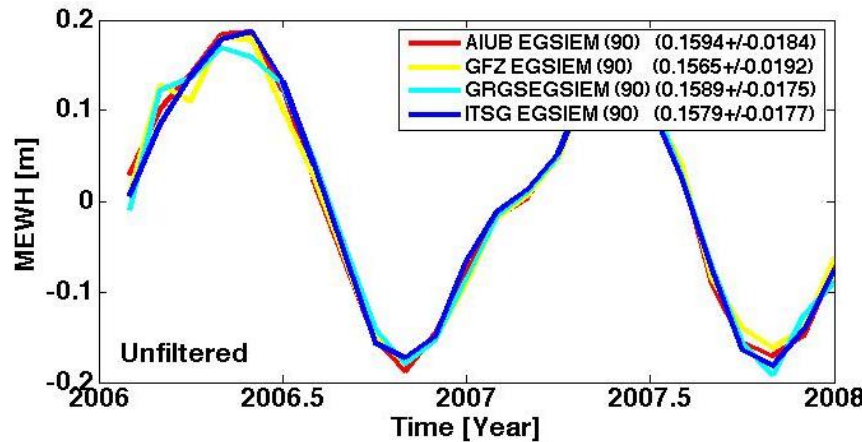`http://dl.aiub.unibe.ch/data/egsiem/private/Gravity/`

Preprocessing (1): Scaling and Screening

- **Rescaling** of *Earth radius* and *Gravitational parameter*

- **Correction** of **C20 bias** (w.r.t. Tide-free system)

- **Screening** of outliers

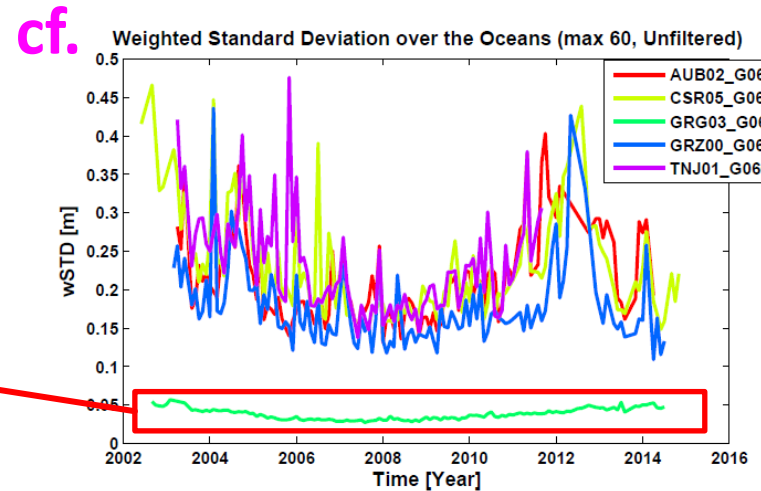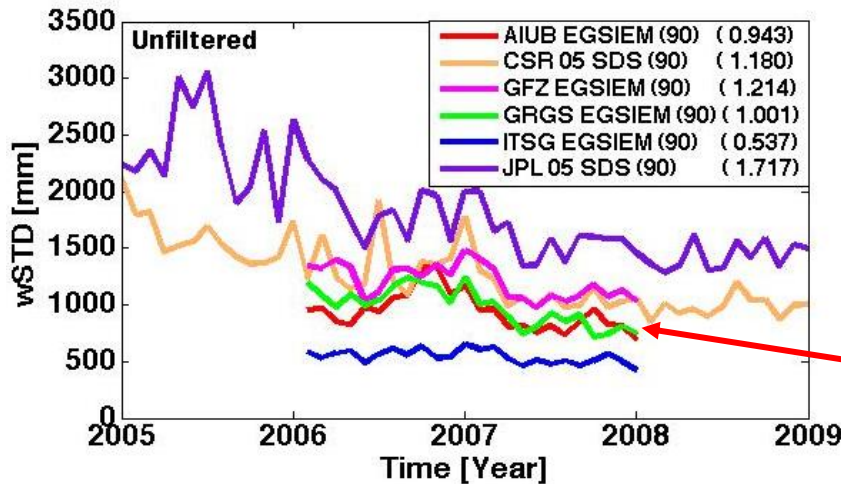 – Criterion: <u>Median + 3MAD</u> using *wSTD over the oceans* (Quality Measure)

Reprocessing

AIUB

GFZ

GRGS

ITSG

Screened out before

Preprocessing (2): Signal and Noise Comparison

MEWH (Amazon River Basin)
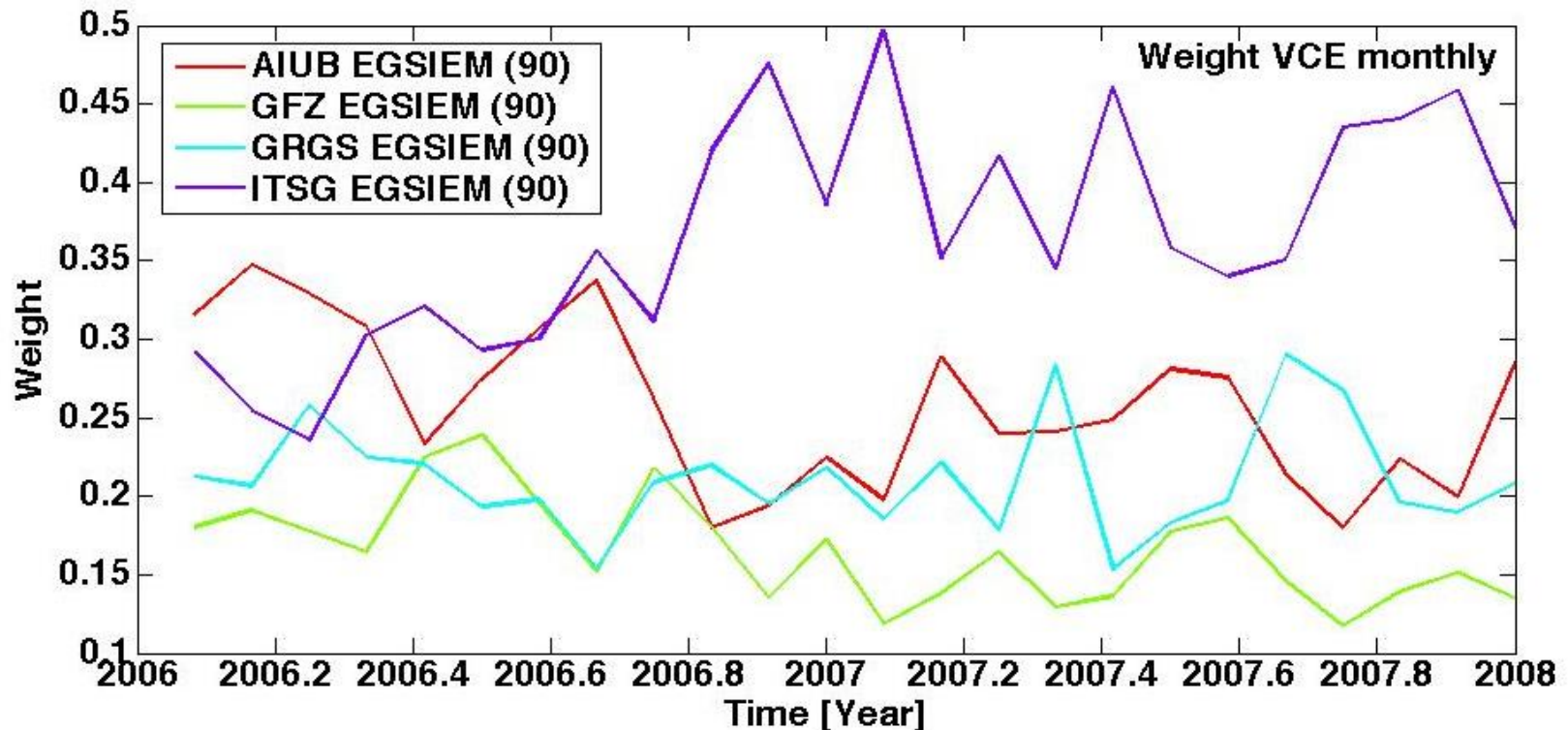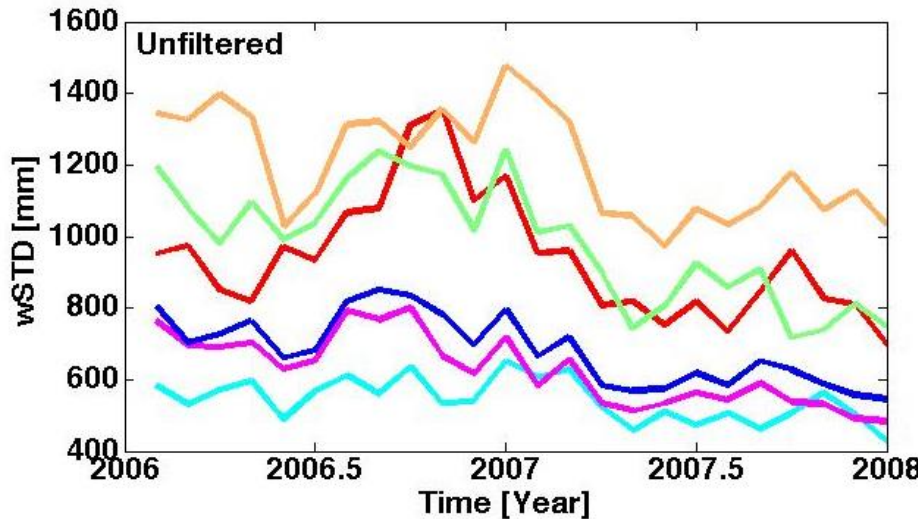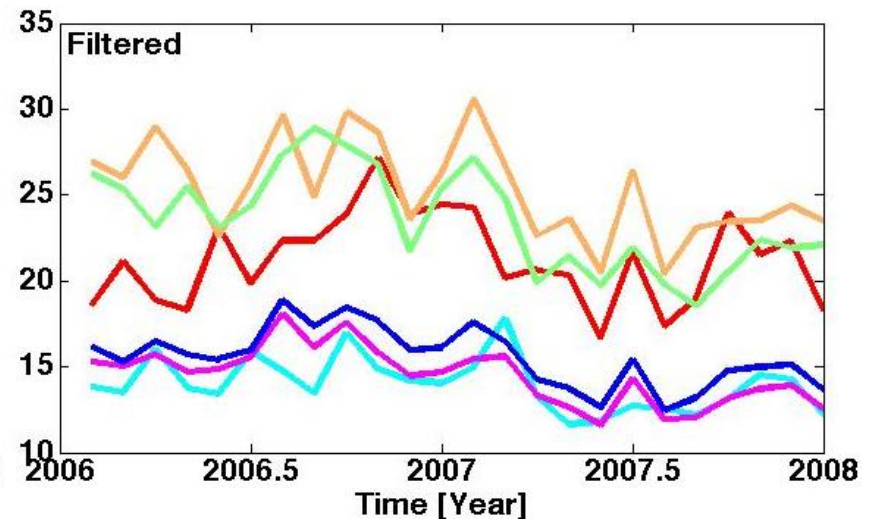

wSTD Oceans

cf.

EGSIEM

Horizon2020

Weights

- Weights from i*terative* process using the *Variance Component Estimation (VCE)* method

Combined Solutions: wSTD over Oceans