

# Deformation studies using GPS networks

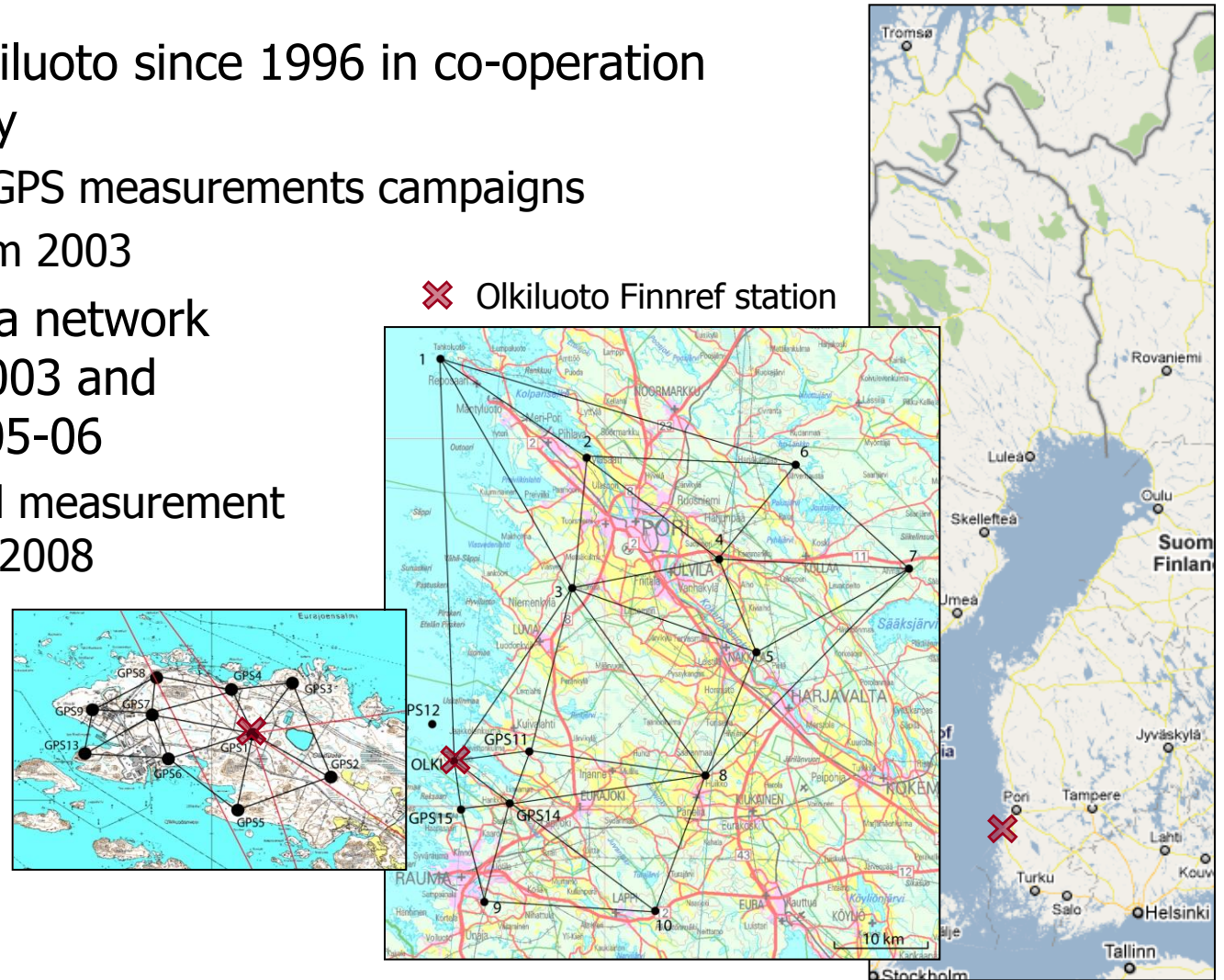
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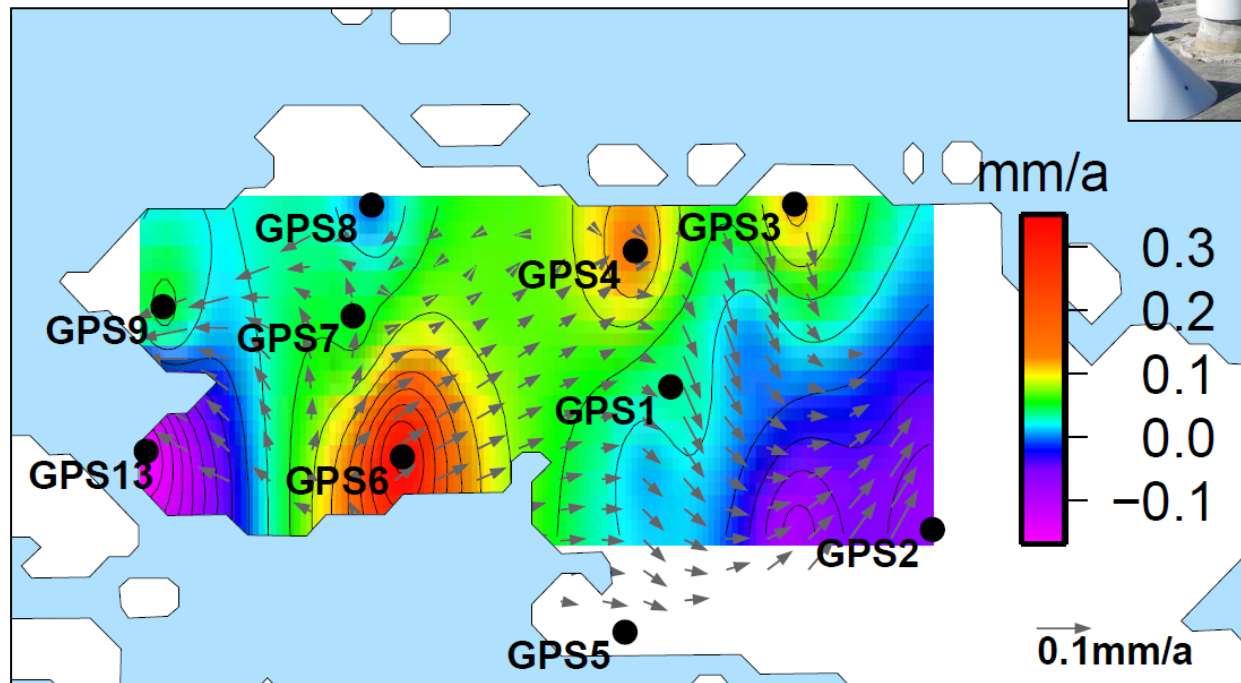
# Introduction

- Studies at Olkiluoto since 1996 in co-operation with Posiva Oy
  - Semiannual GPS measurements campaigns
  - Levelling from 2003
- Geo-Satakunta network established 2003 and expanded 2005-06
  - Three annual measurement during 2003-2008



# Olkiluoto results

- Joint analysis of the GPS and levelling time series
- Estimated relative velocities for the pillars

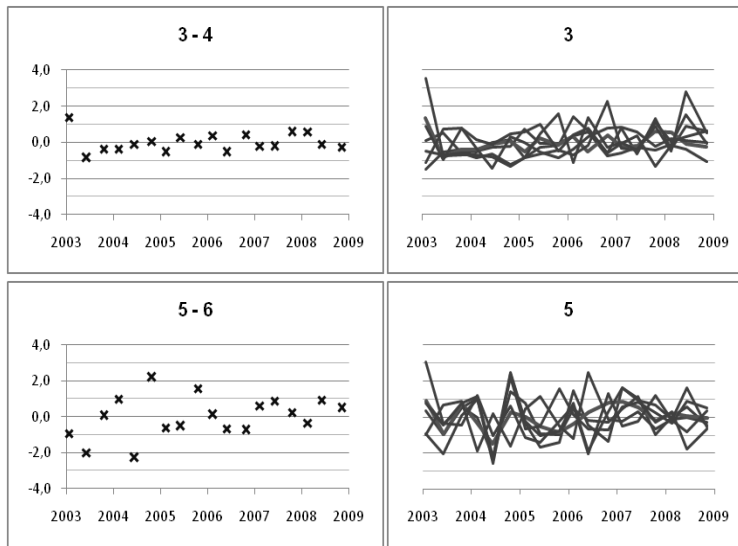


Horizontal velocities from the GPS and vertical velocities from the levelling.  
Max horizontal velocity  $0.10 \pm 0.03$  mm/a and vertical  $0.18 \pm 0.04$  mm/a.



# Geo-Satakunta results

- Example of baseline length time series
- Geological considerations



Time series of a single baseline (above left) and all baseline from a single station (above right). Deviations from the mean in millimetres.

