



InSAR Time Series Analysis of Sacramento – San Joaquin River Delta using UAVSAR Measurements Preliminary Results

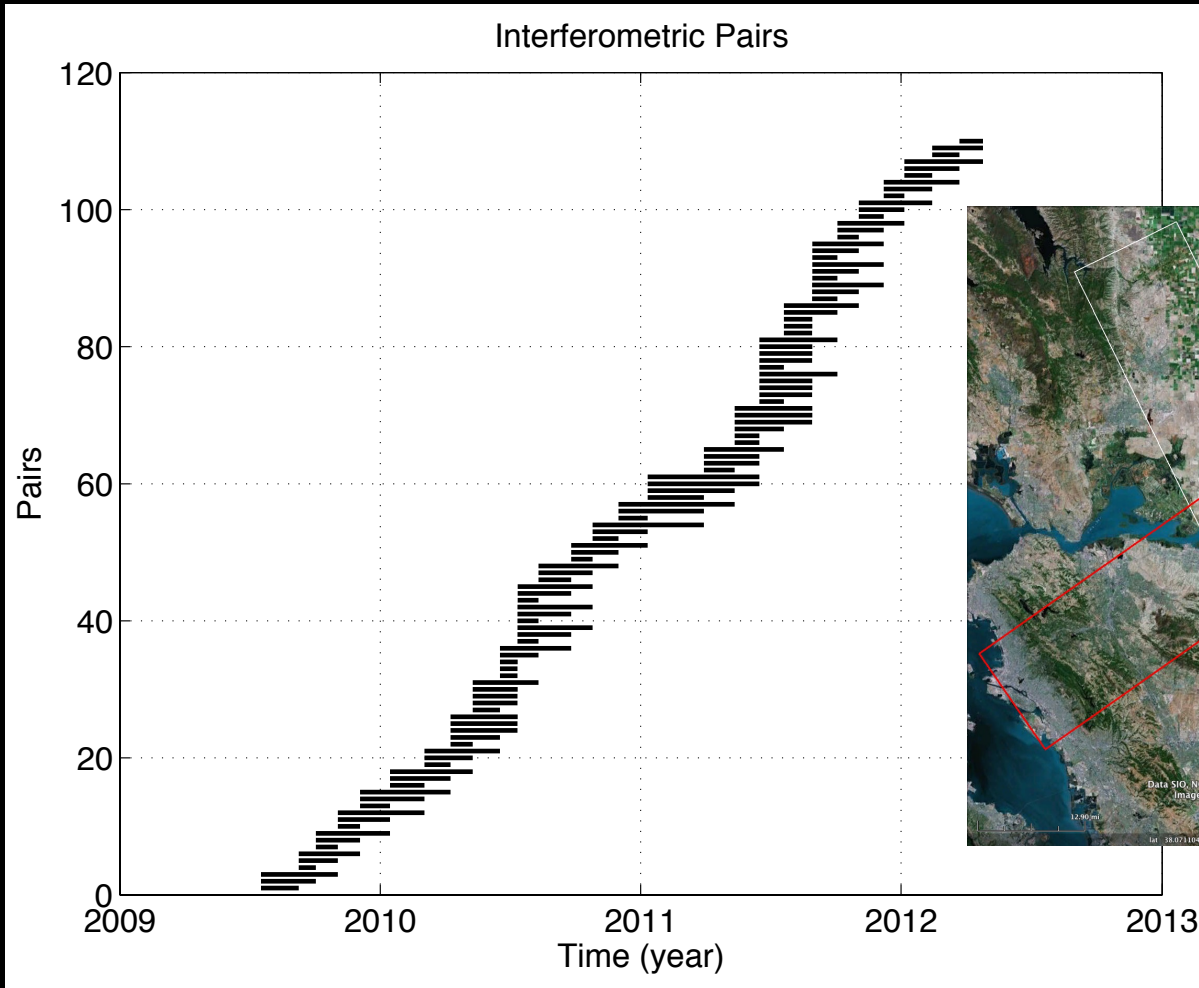
Sang-Ho Yun, Cathleen Jones, Piyush Agram, Scott
Hensley
Jet Propulsion Laboratory
California Institute of Technology

Data SIO, NOAA, U.S. Navy, NGA, GEBCO
Image © 2013 TerraMetrics
Data CSUMB SFML, CA OPC

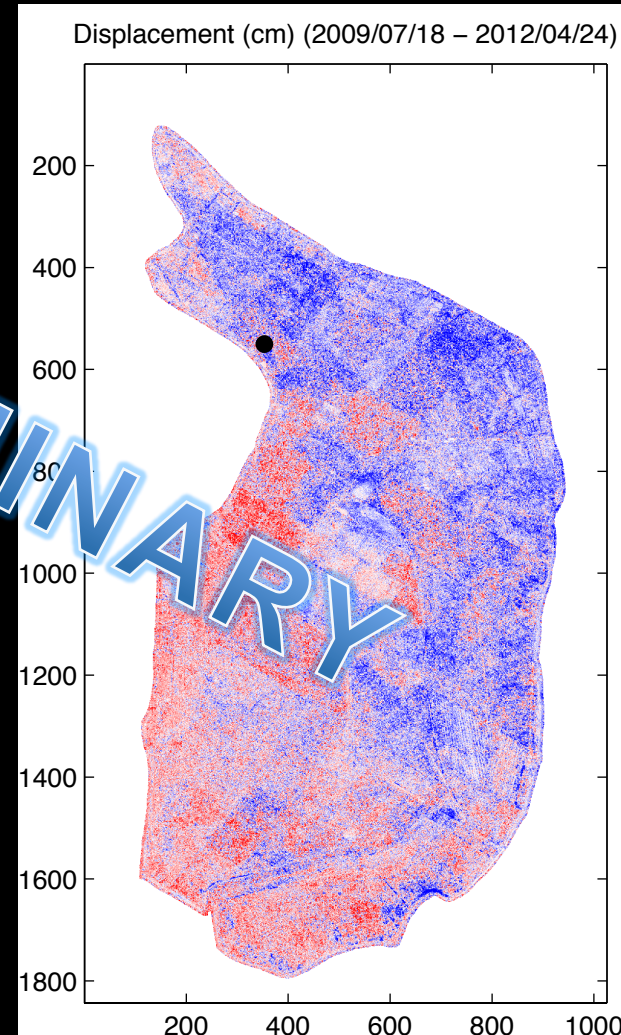
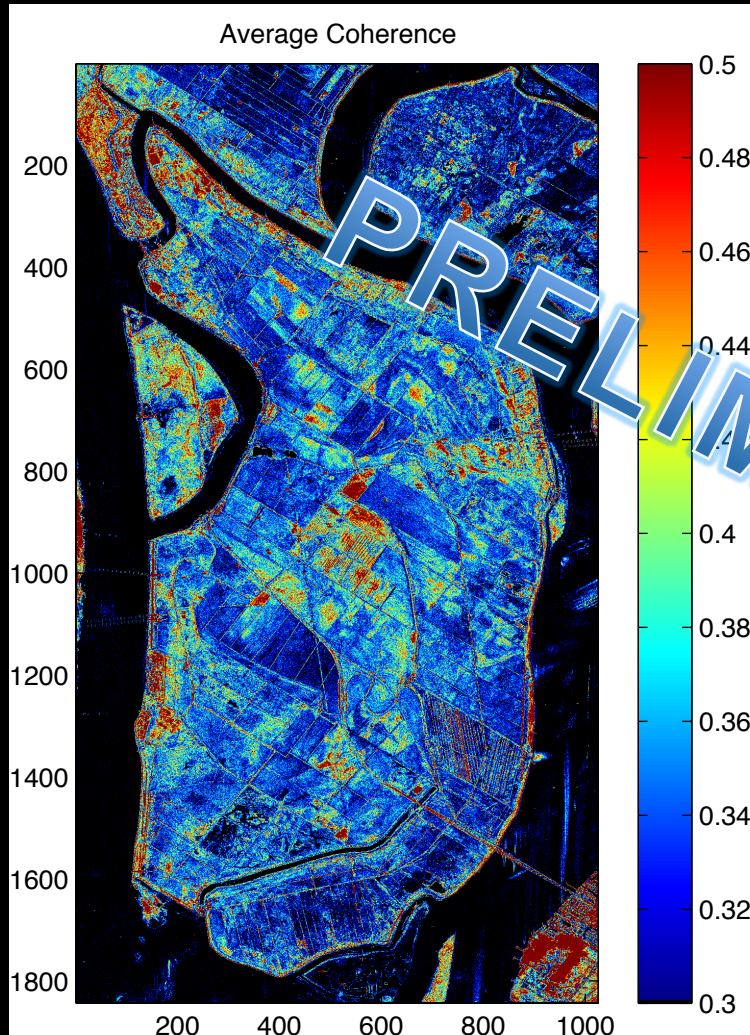
Google earth



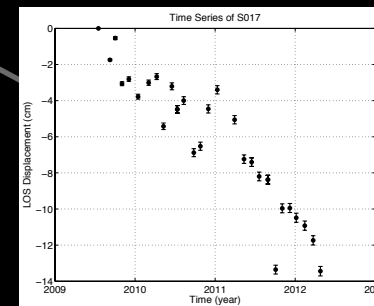
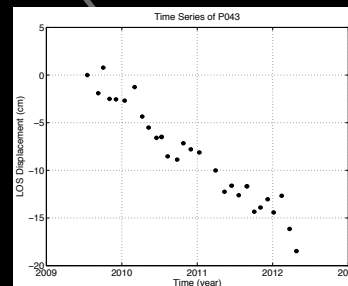
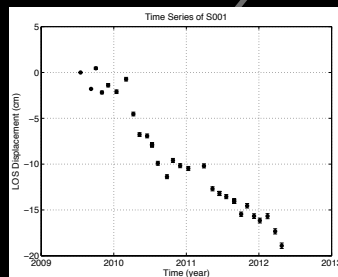
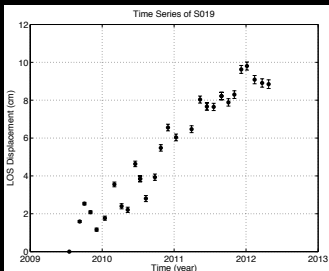
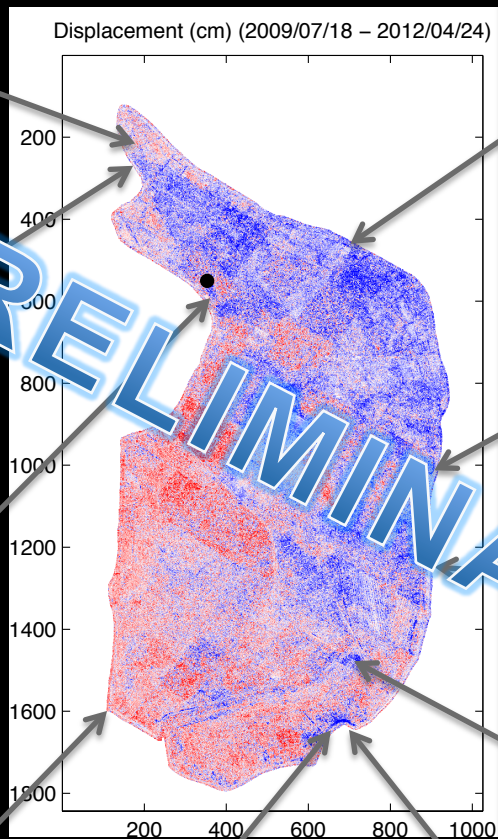
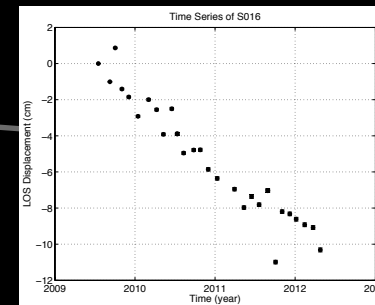
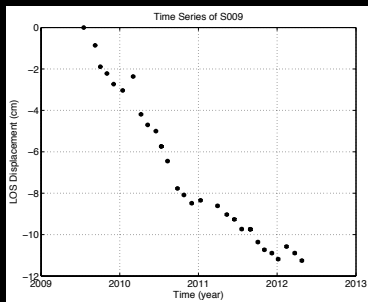
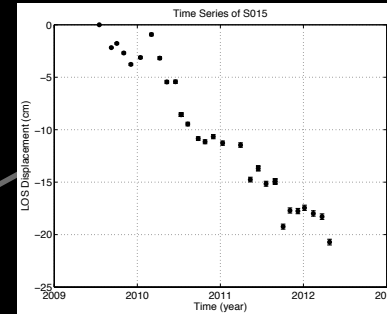
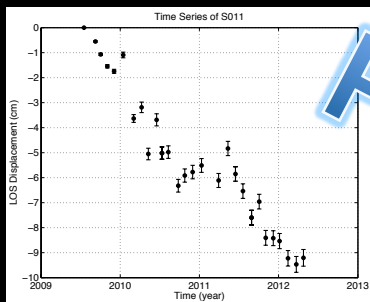
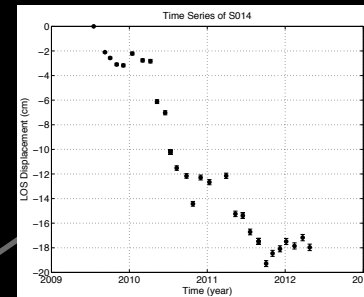
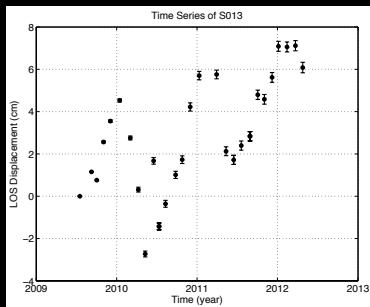
Interferometric Pairs (T23518)



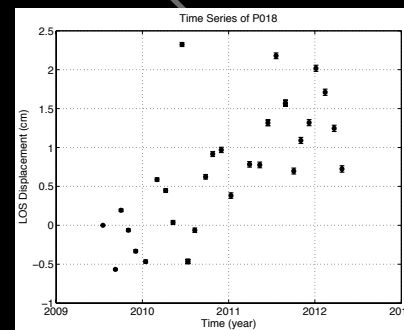
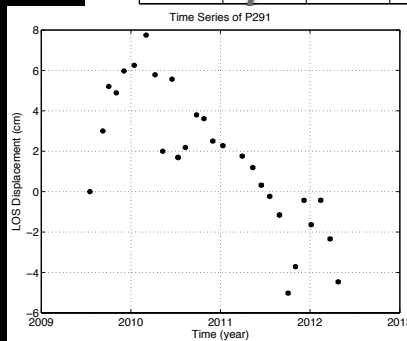
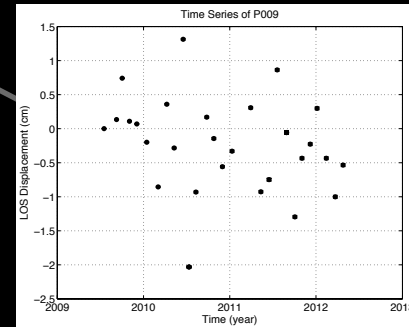
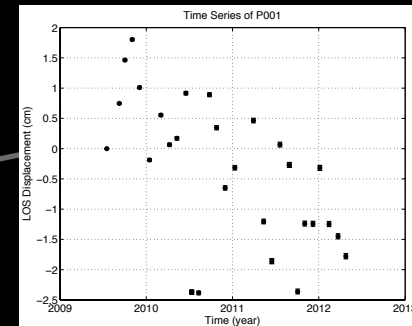
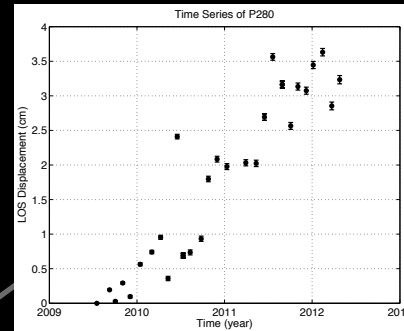
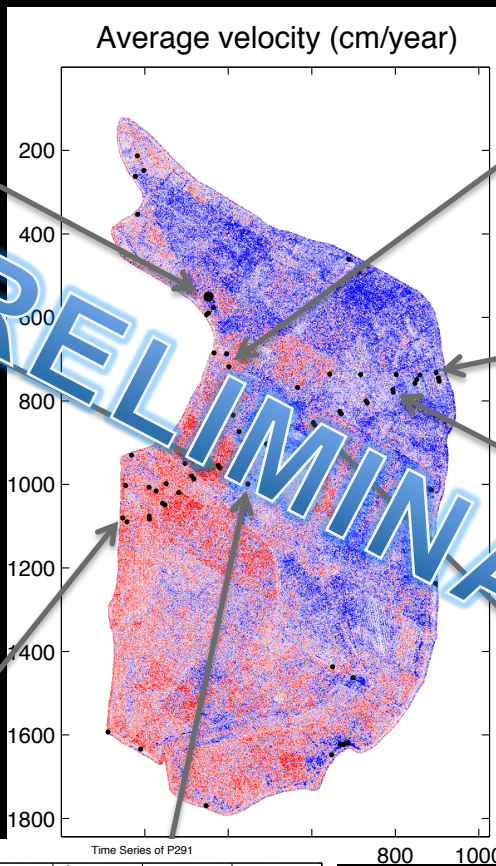
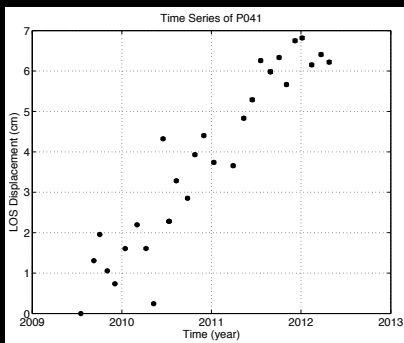
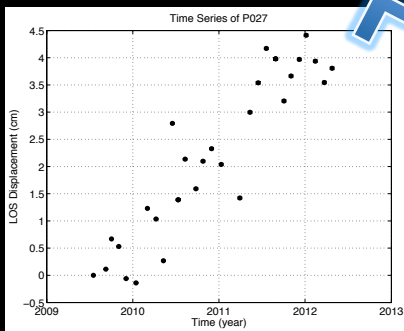
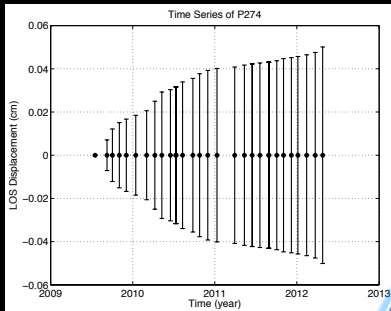
Coherence and Displacement



Displacement Time Series

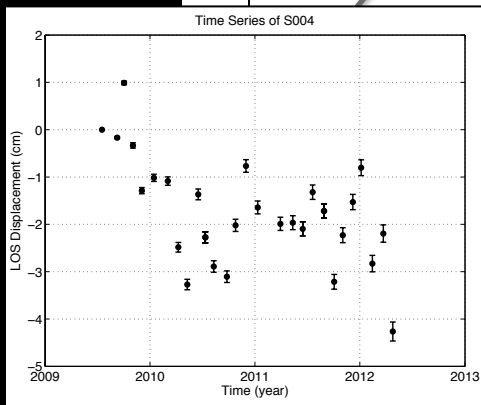
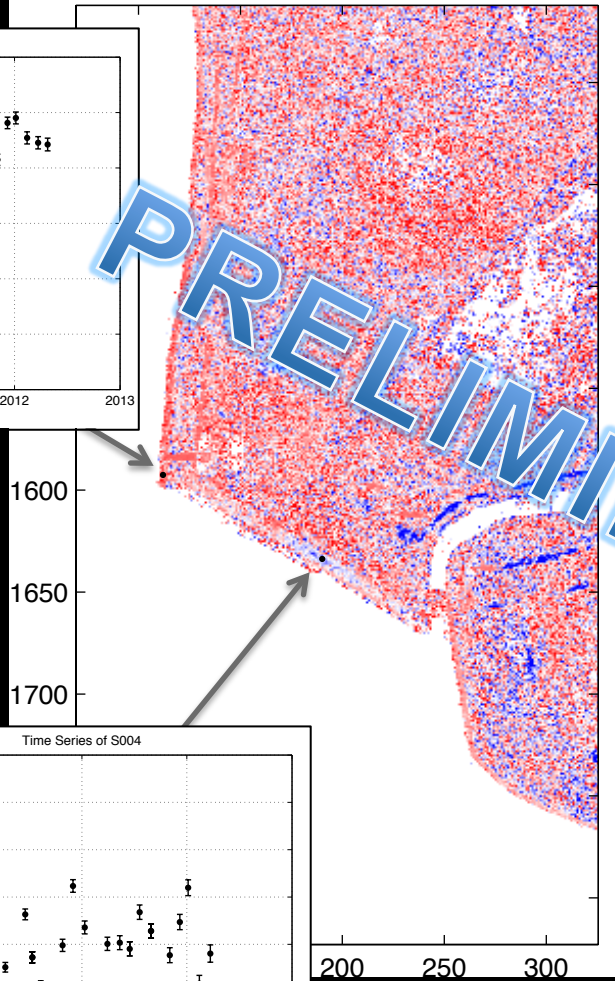
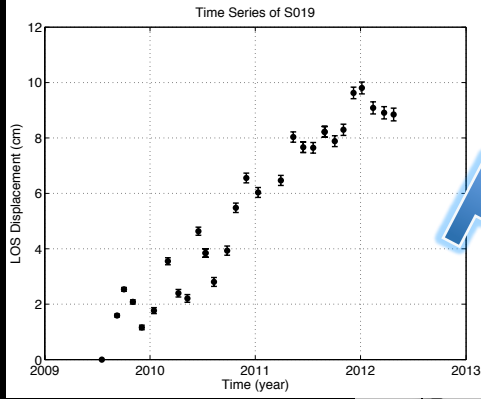


Displacement Time Series

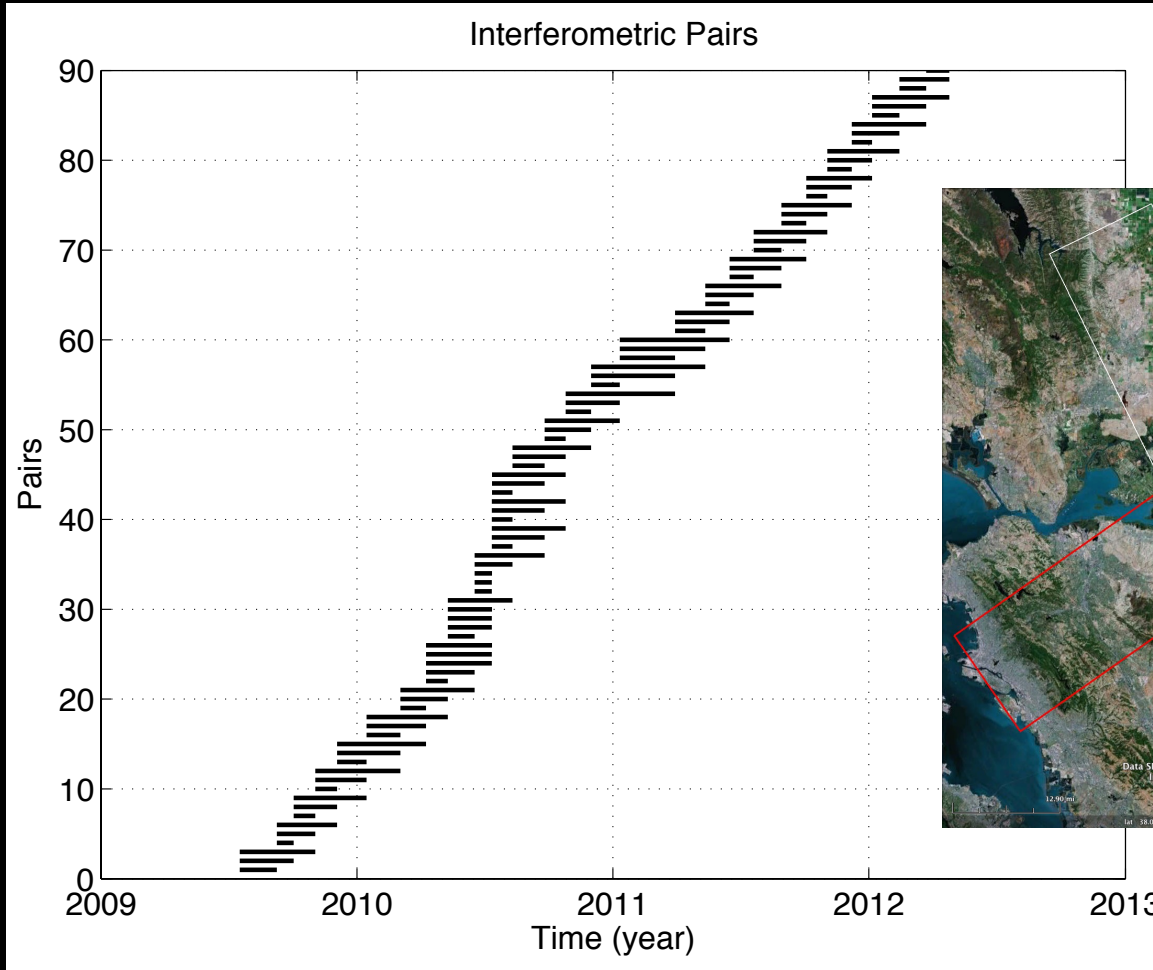


Levee Subsidence

Average velocity (cm/year)

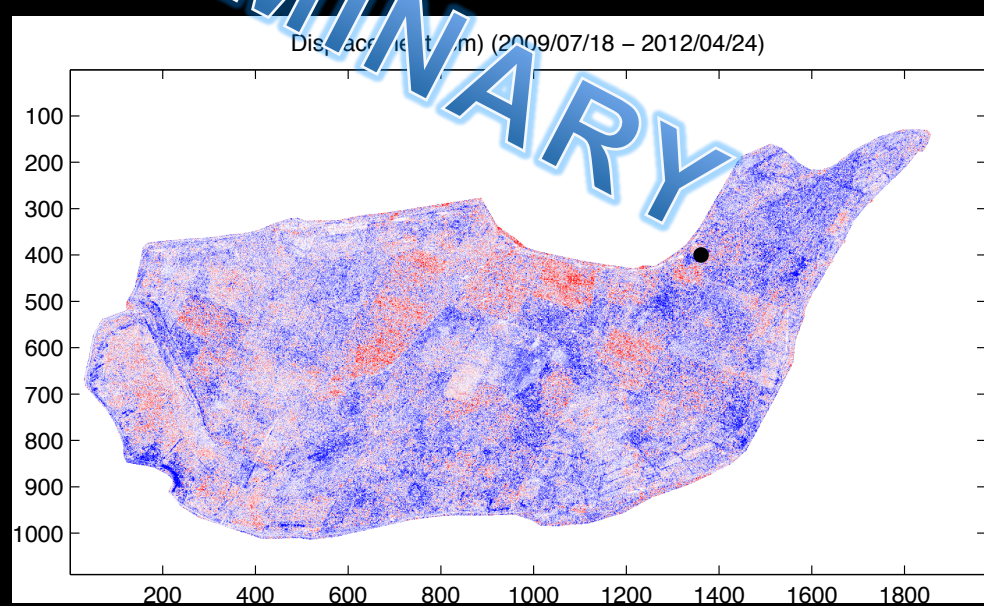
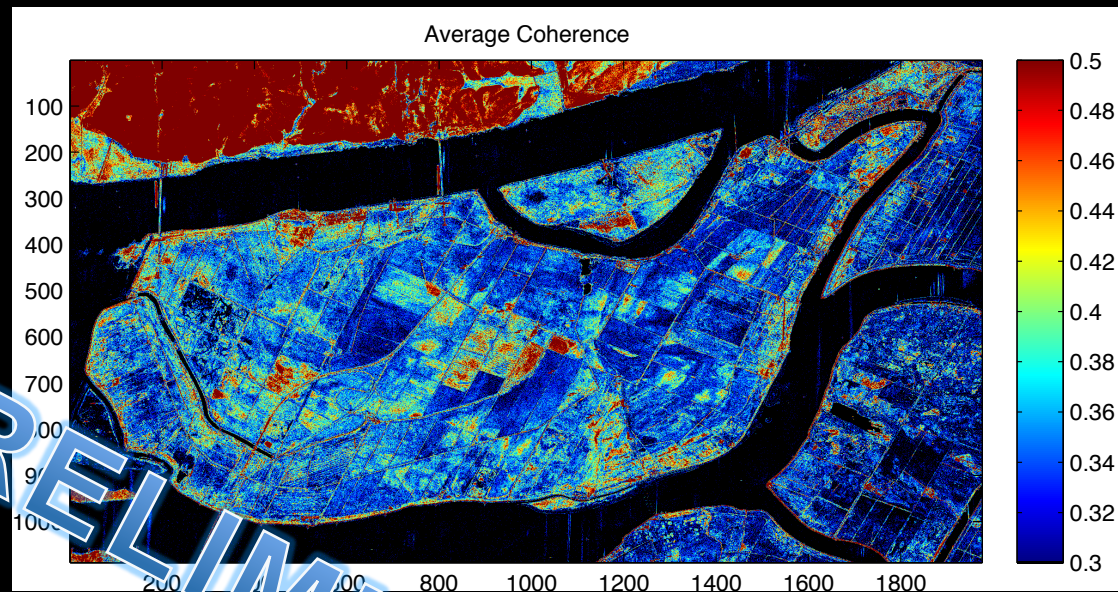


Interferometric Pairs (T15502)

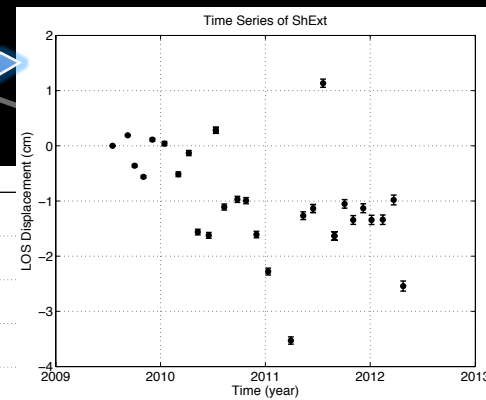
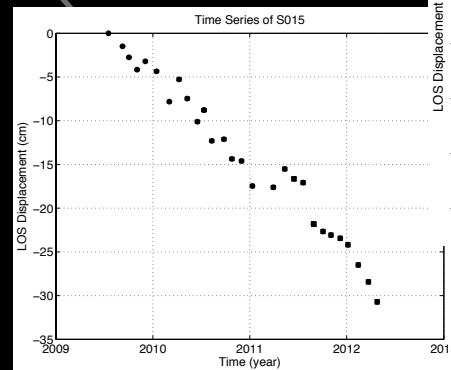
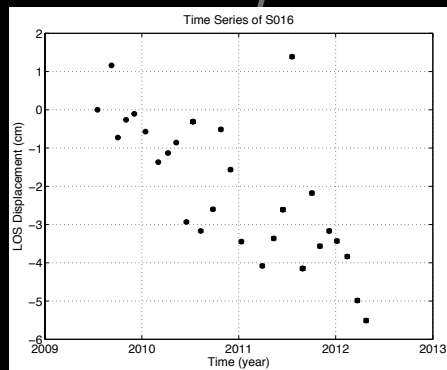
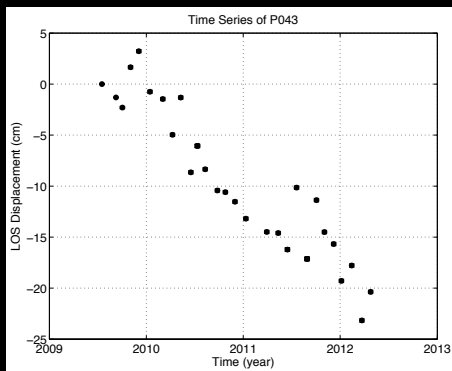
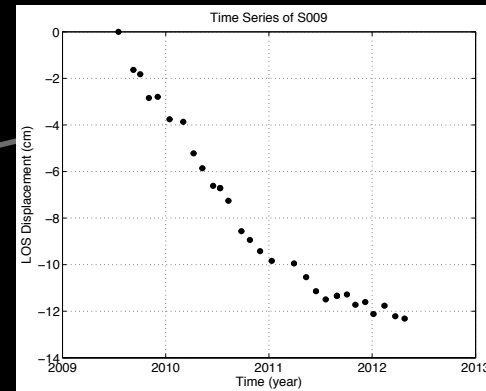
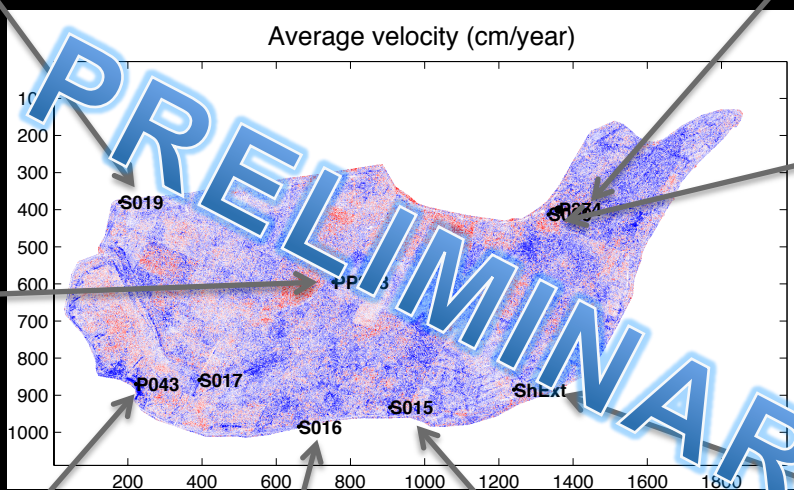
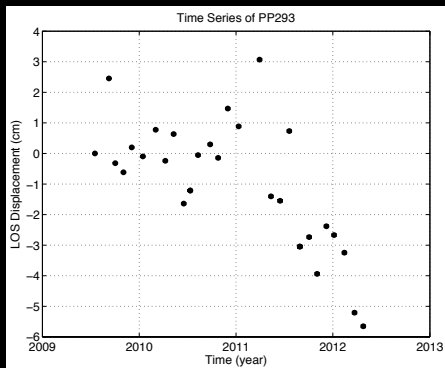
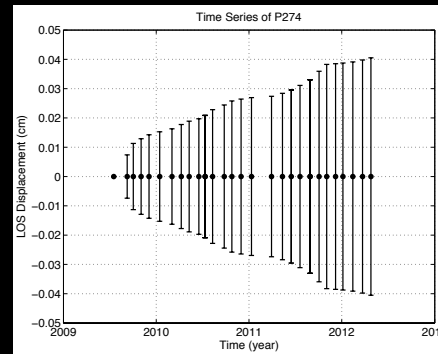
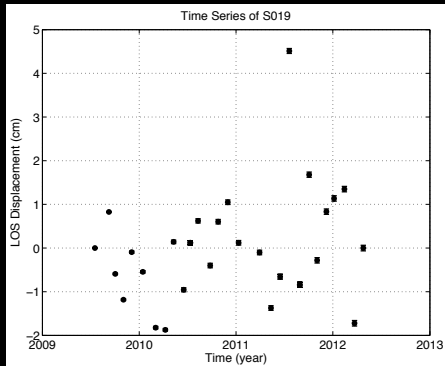


Coherence Displacement

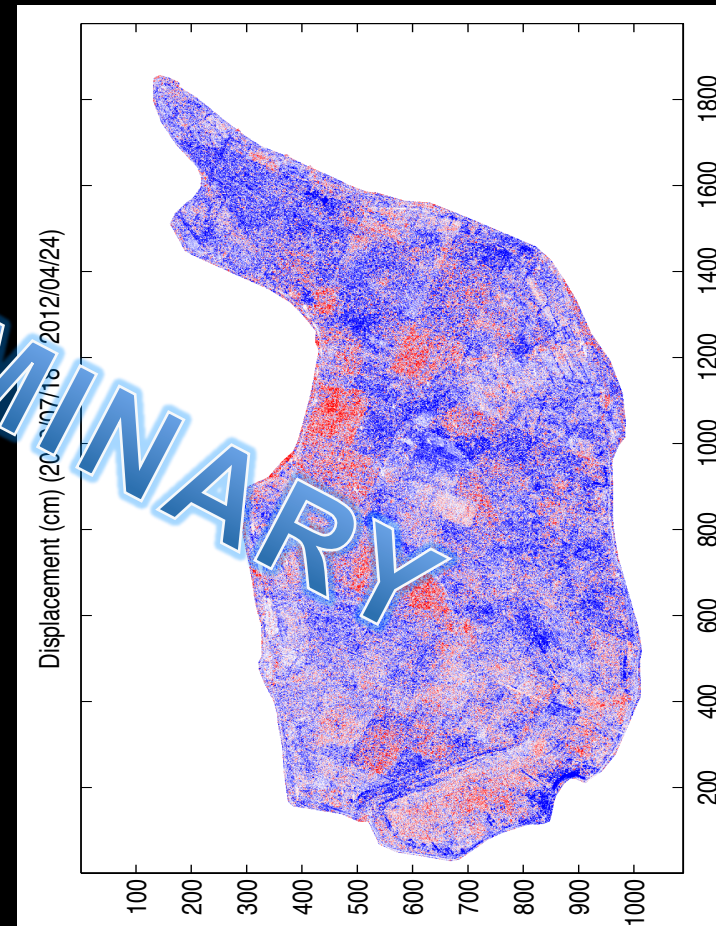
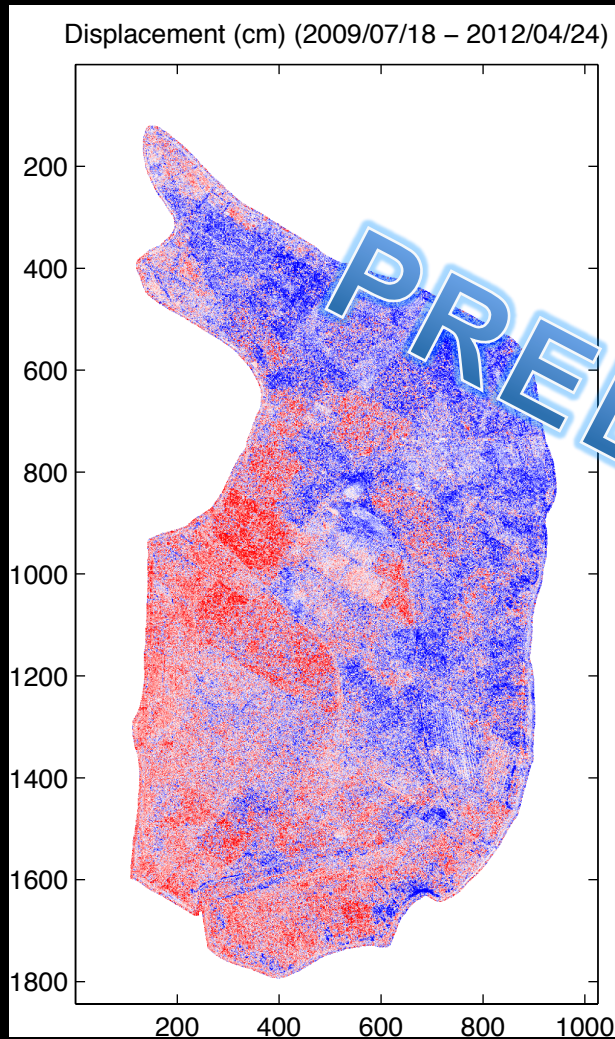
PRELIMINARY



Displacement Time Series

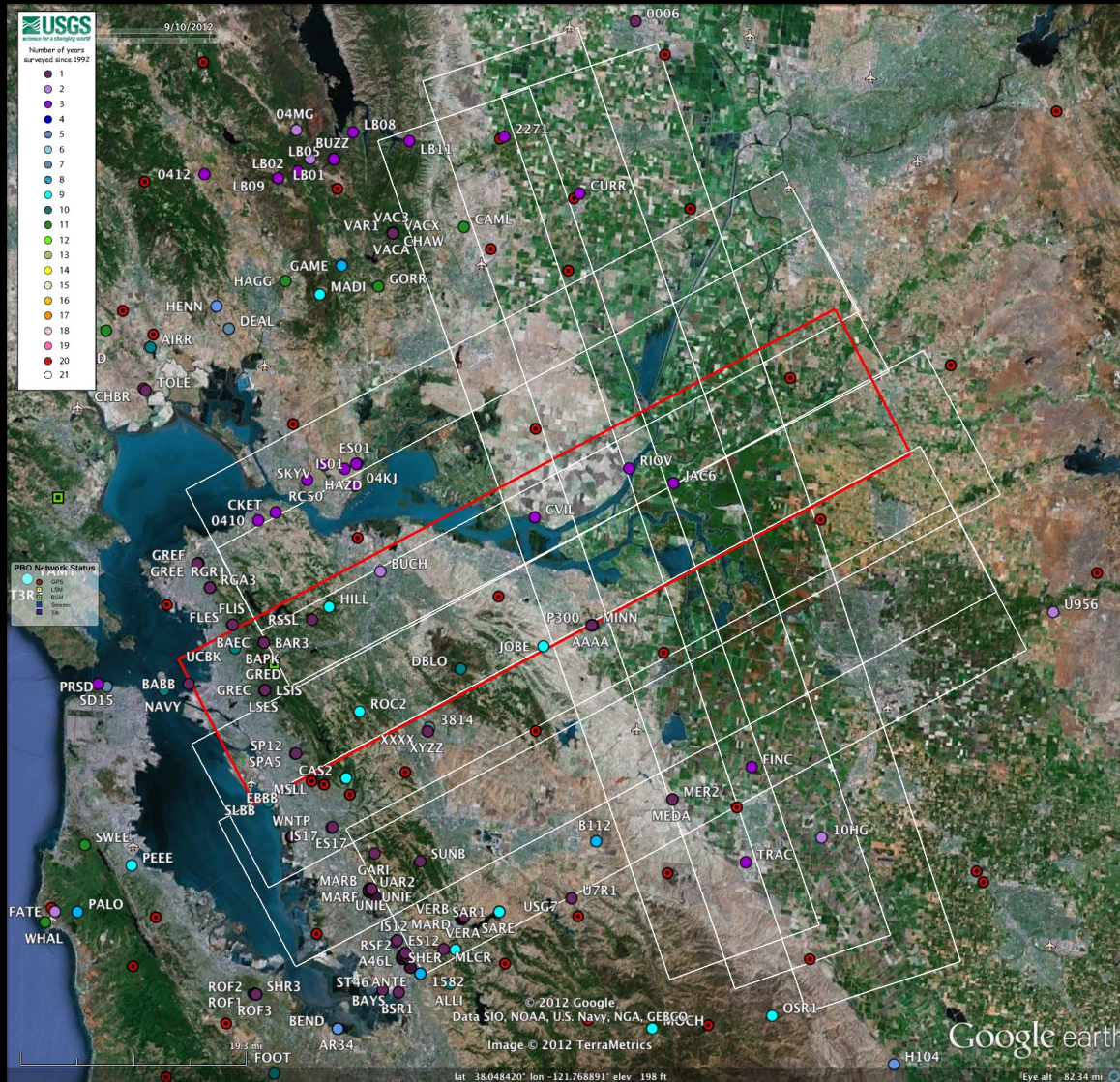


Displacement T23518 vs T15502

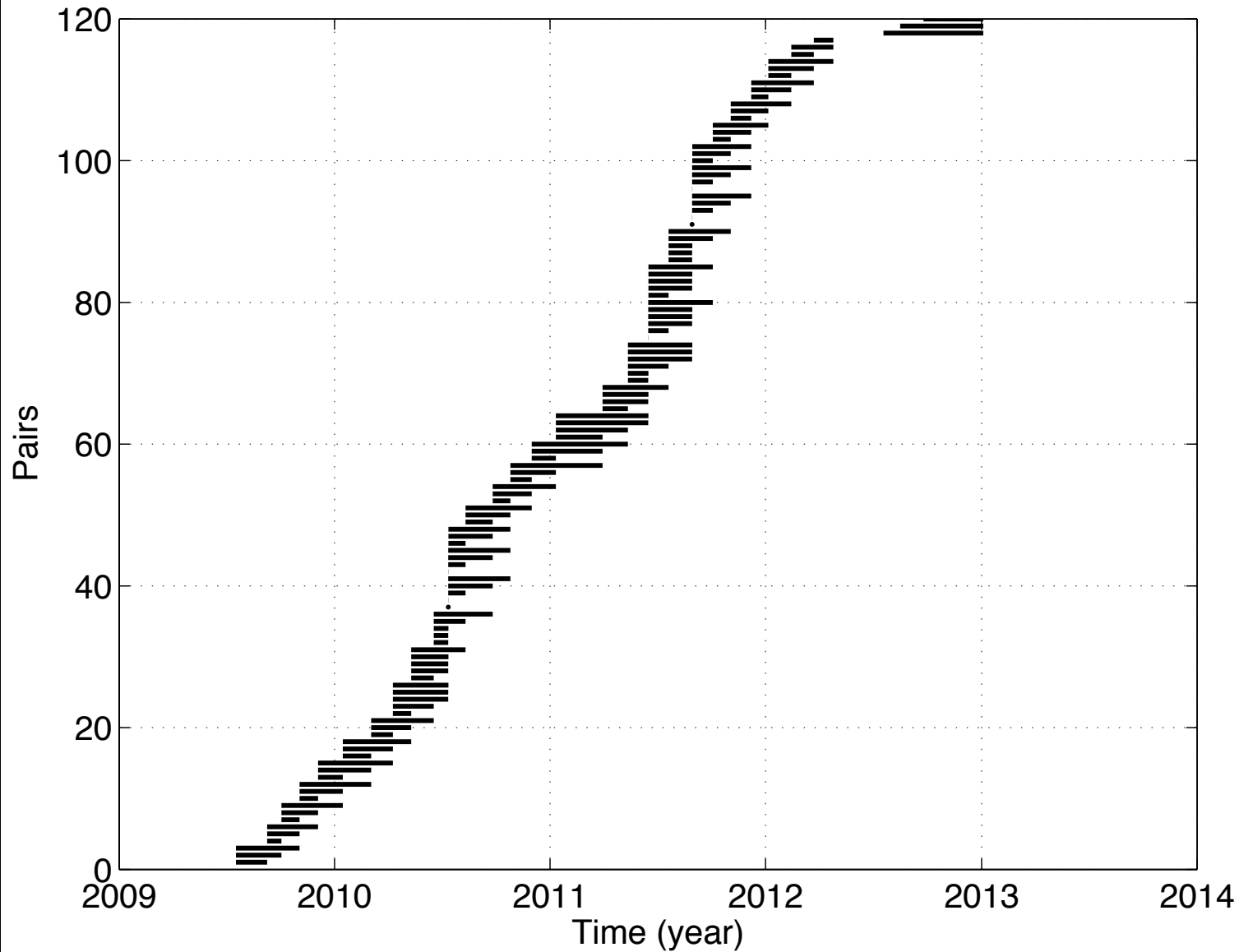


Processing with GAnT

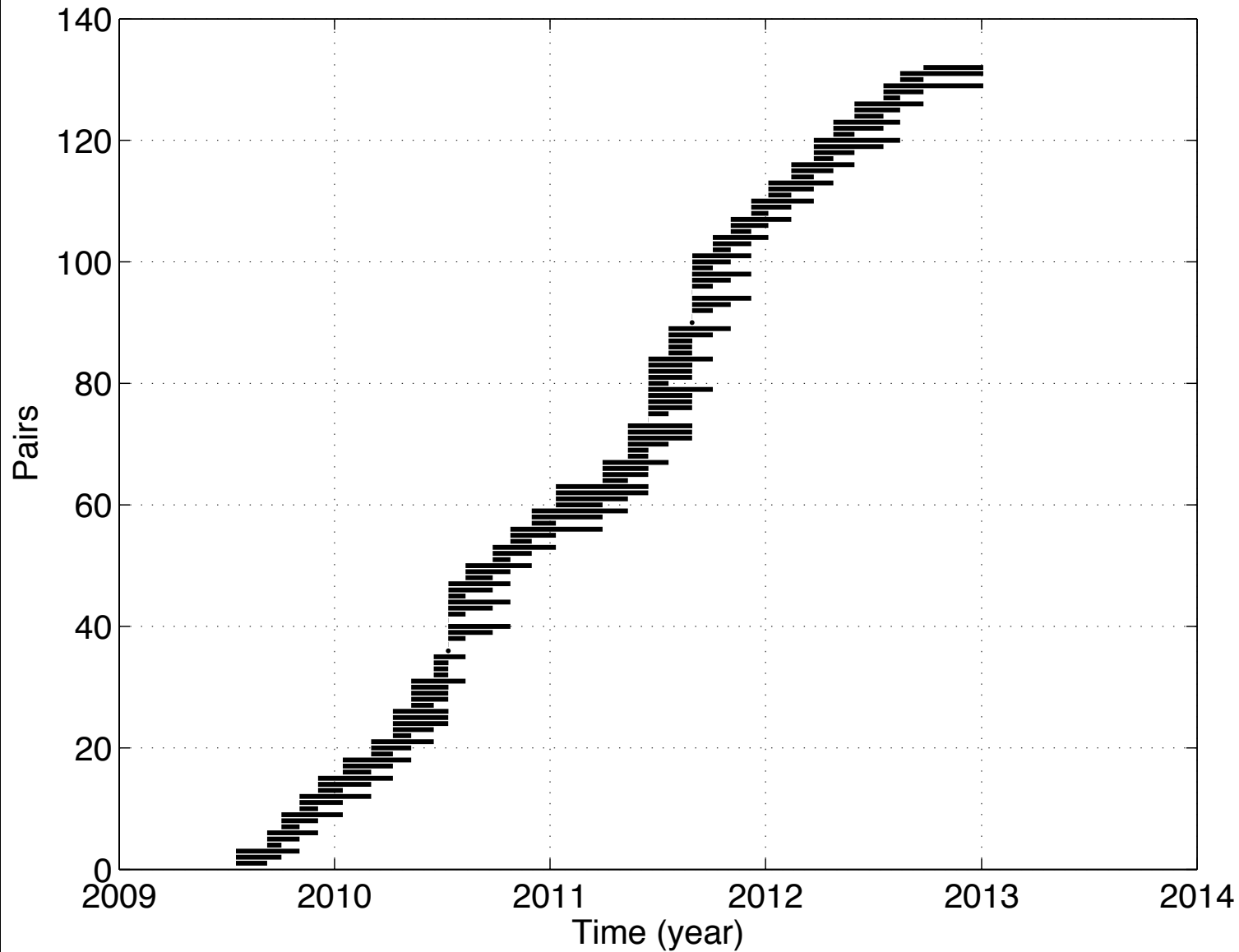
3.5 years
1-2 flights/month
9 tracks/flight
min time span: 3 hrs
40 million pixels/track
1005 interferograms



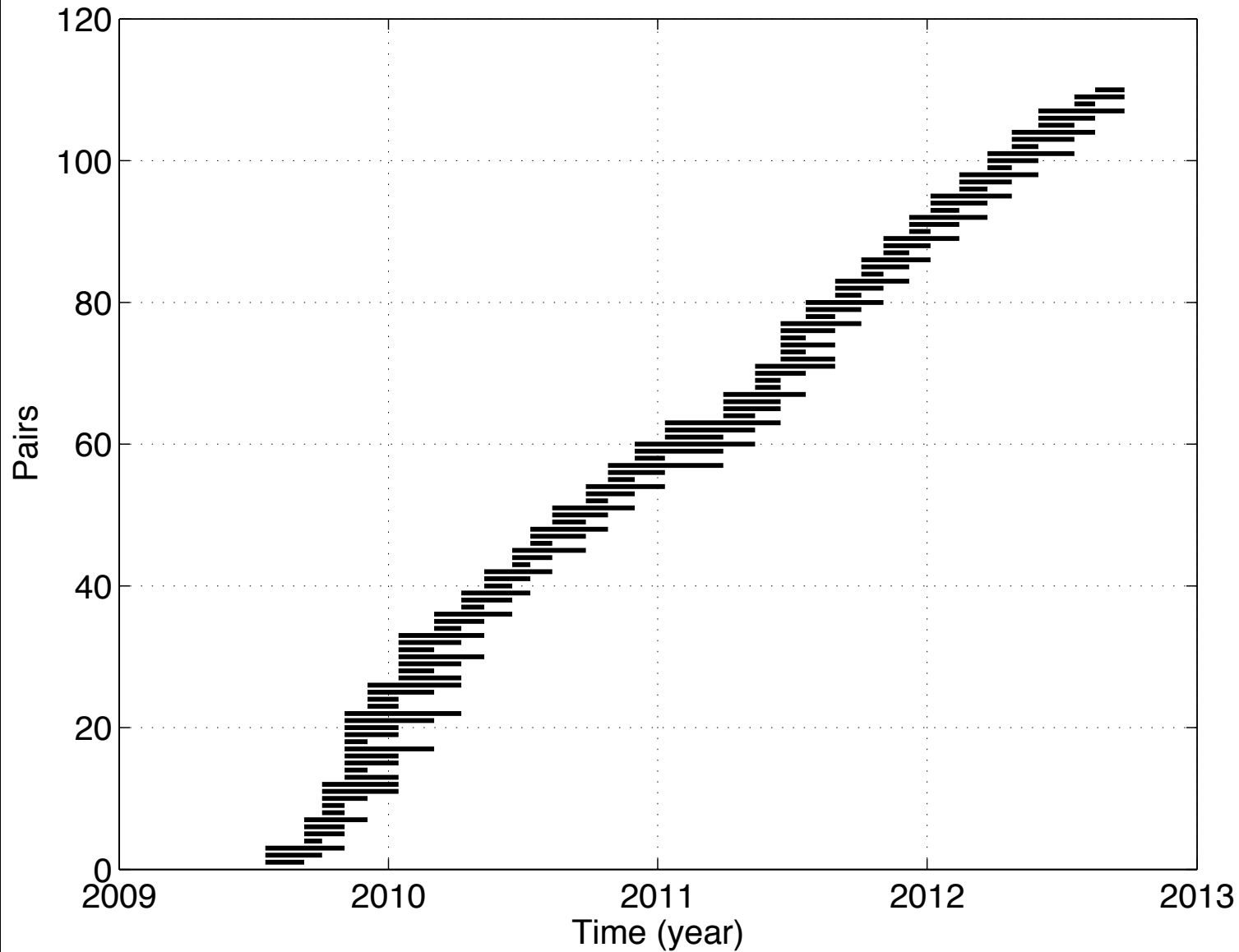
T23518 Interferometric Pairs



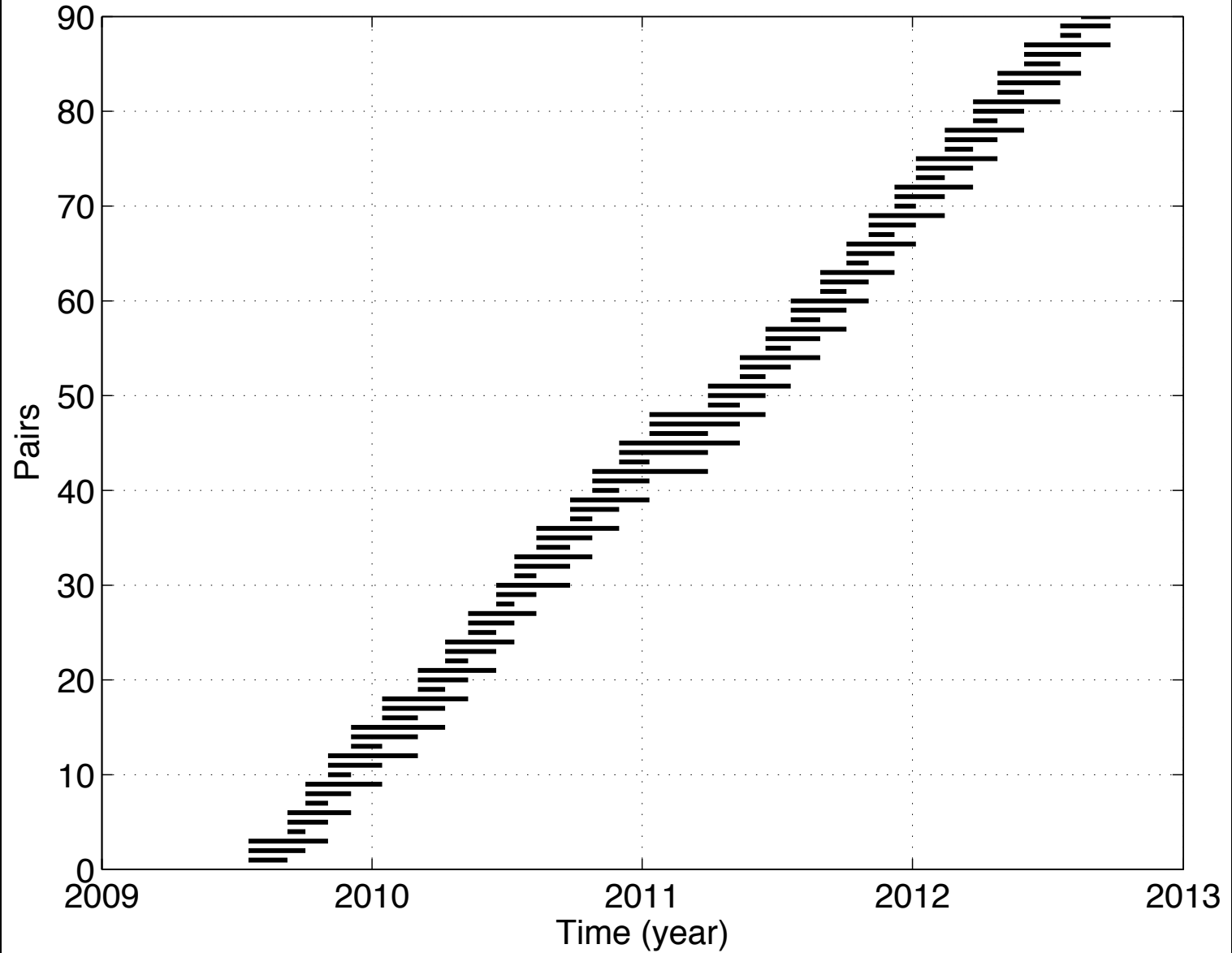
T05519 Interferometric Pairs



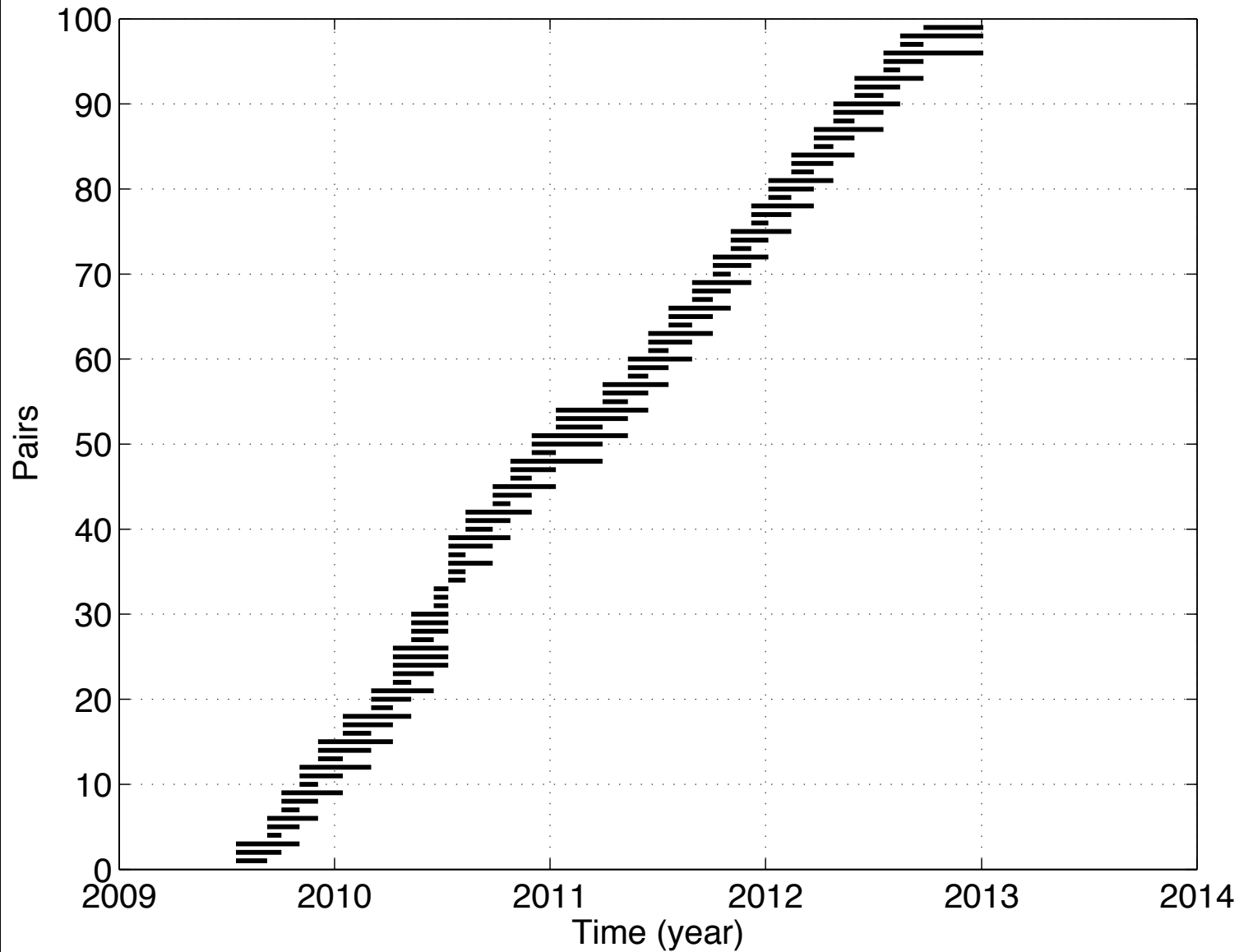
T05508 Interferometric Pairs



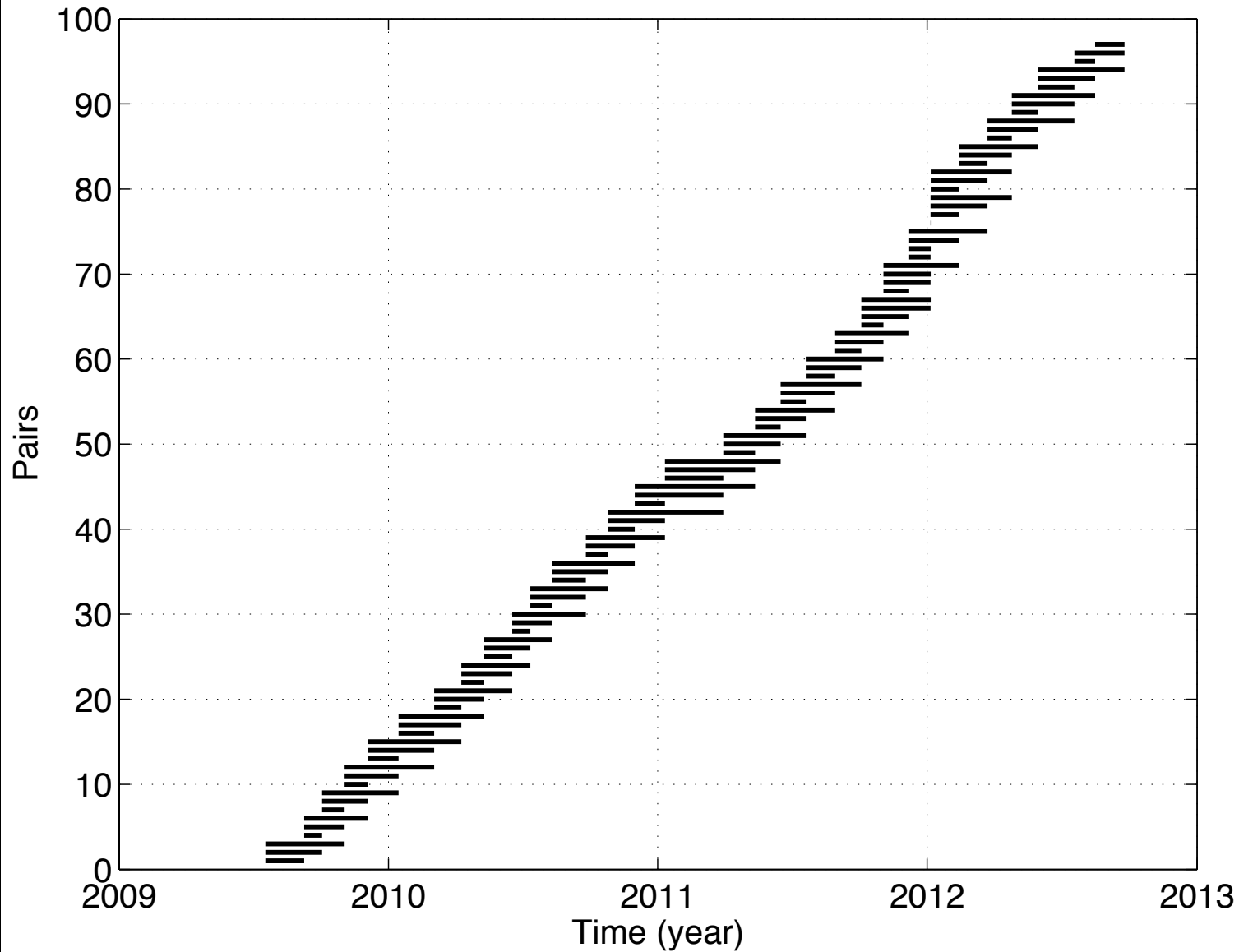
T05520 Interferometric Pairs



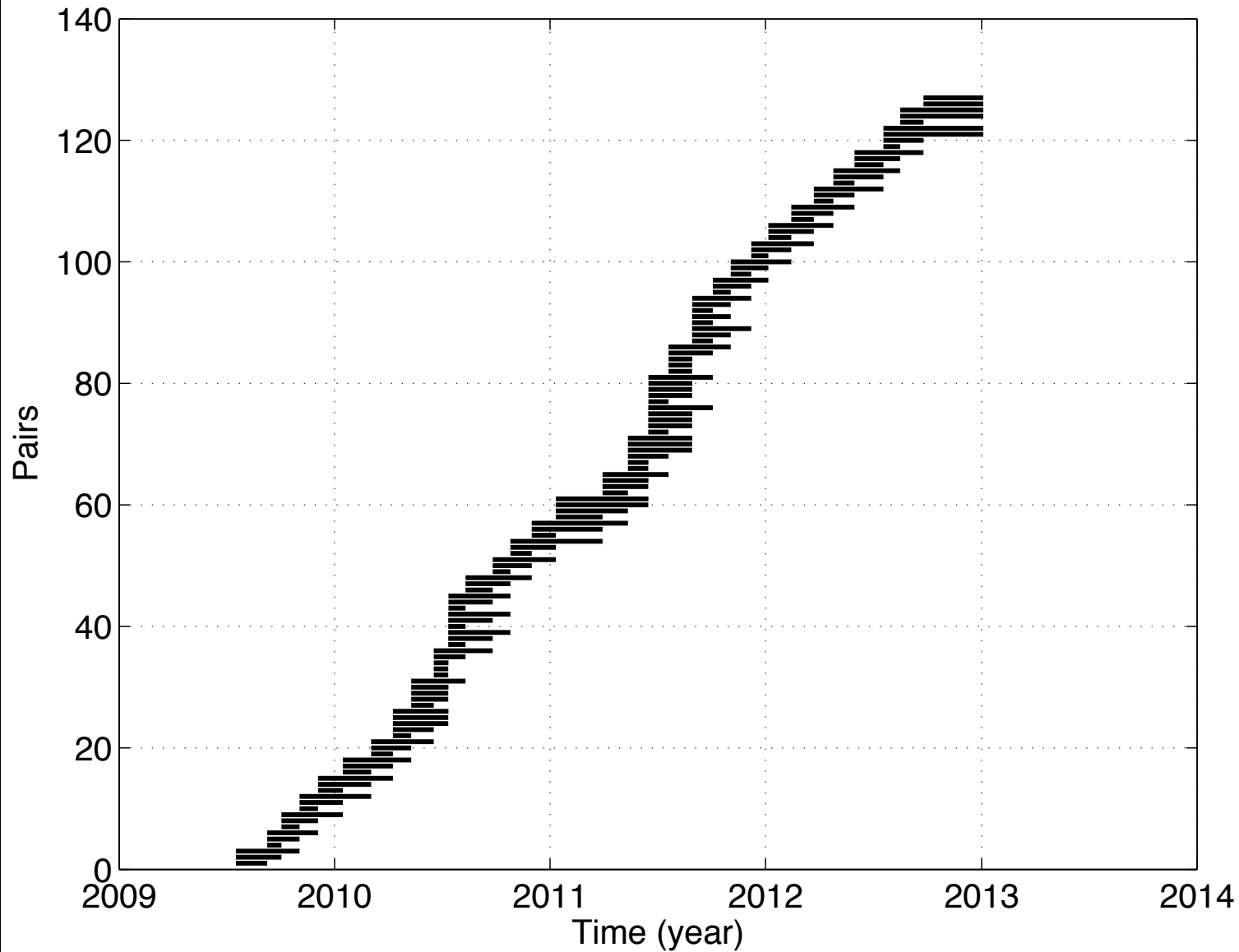
T15502 Interferometric Pairs



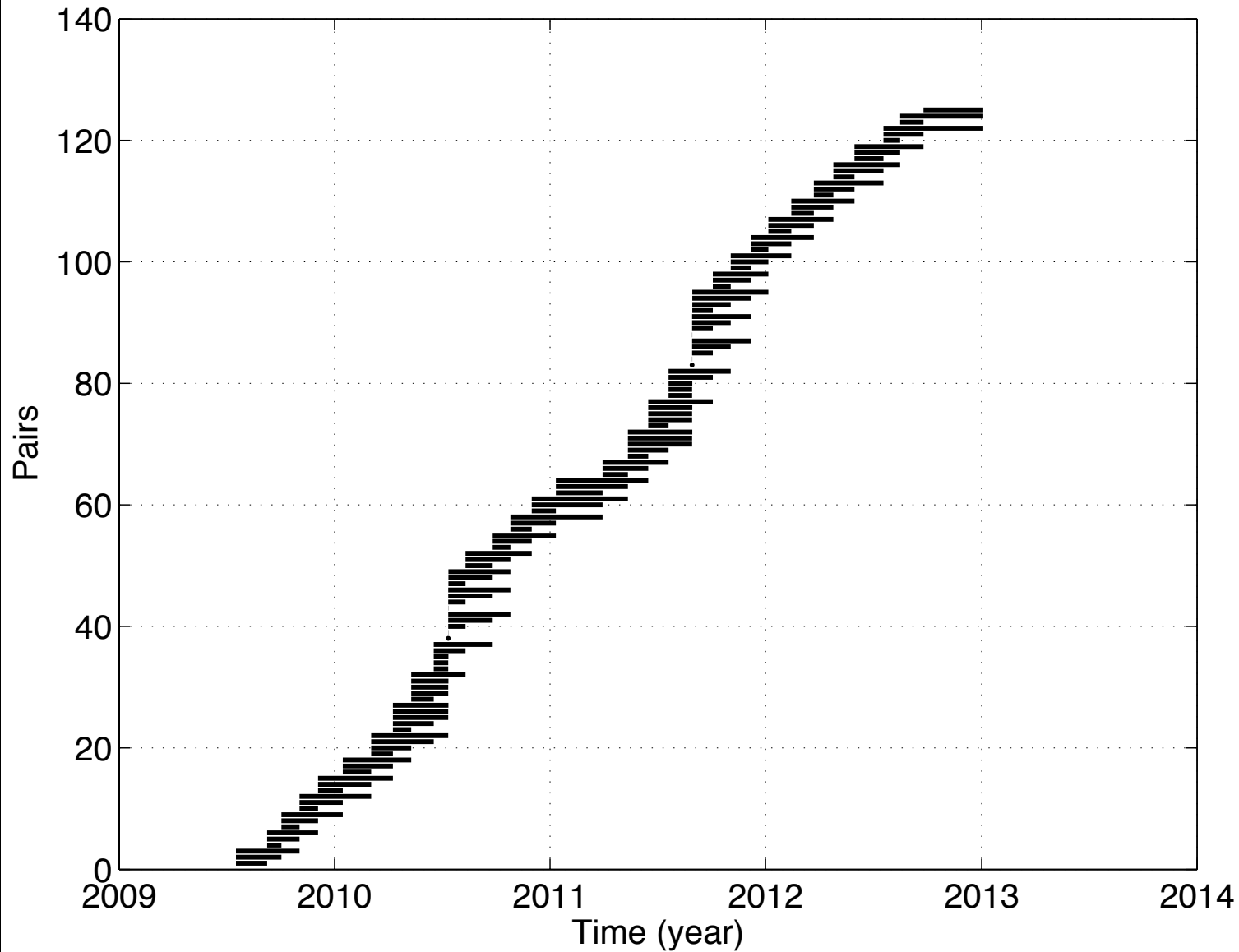
T23519 Interferometric Pairs



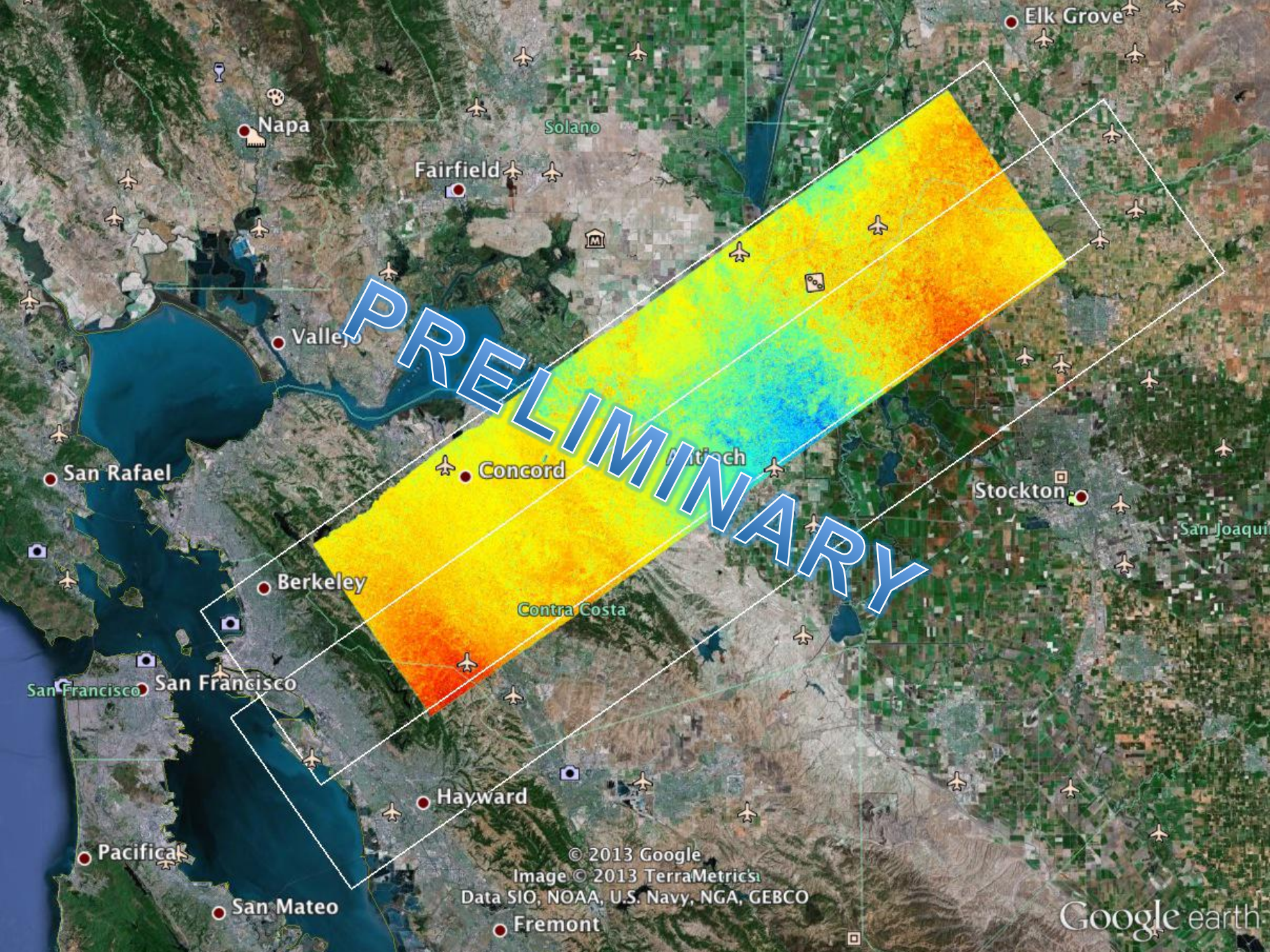
T23520 Interferometric Pairs



T33502 Interferometric Pairs



PRELIMINARY



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Data SIO, NOAA, U.S. Navy, NGA, GEBCO
Fremont

Google earth

Future Work

Coherence weighting

DEM error

Topo-correlated
Troposphere

GPS tie points

Time series mosaic

2 more years data

More processing ...

