

Figure S3-A

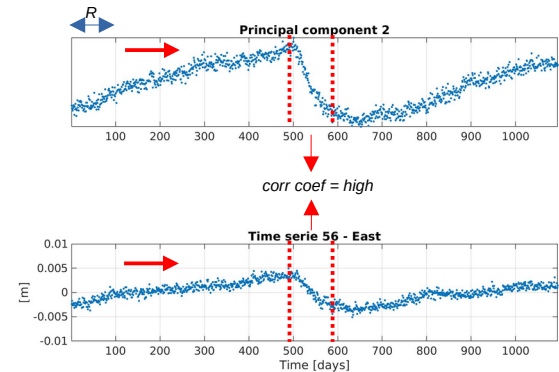
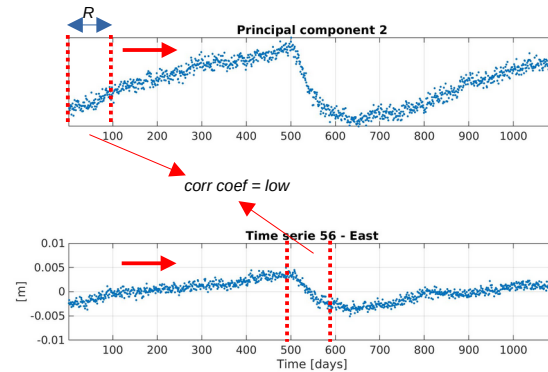
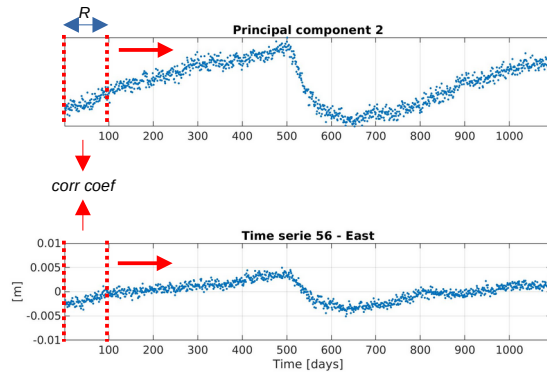
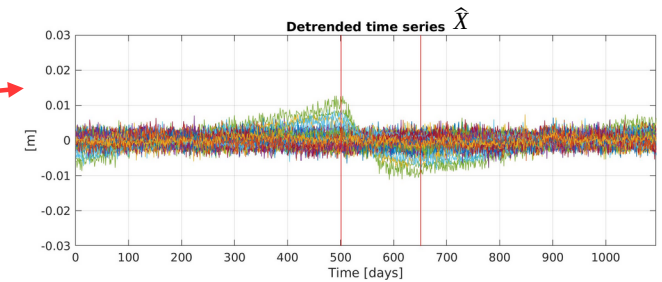
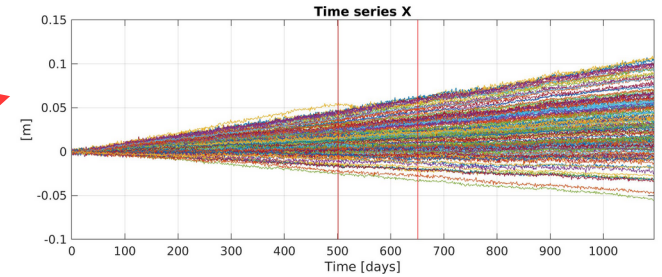
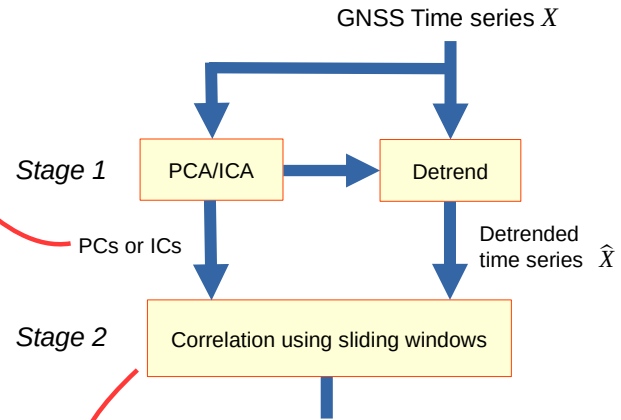
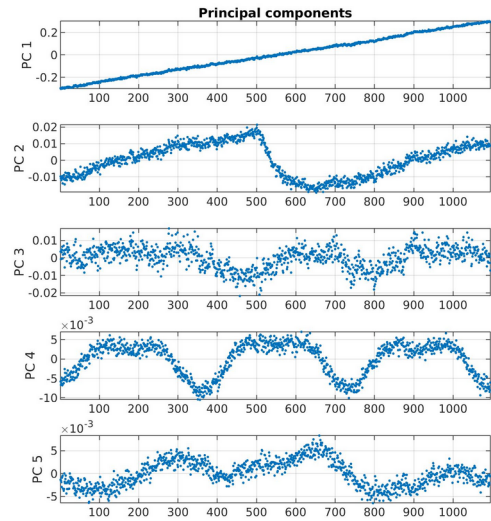
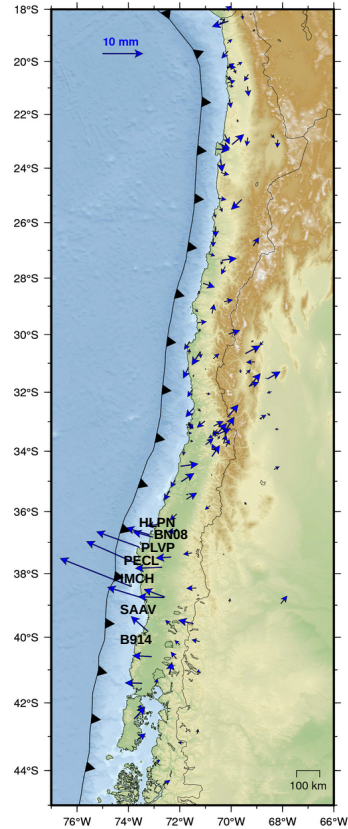


Figure S3-B



Stage 2

Correlation using sliding windows

Corr. matrices ρ_{kl}

Stage 3

Search for maximum correlation time series

Matrix H_ρ
Time indexes

Stage 4

Clustering for temporal detection

Correlation-based iterative analysis for each PC or IC

Cluster of stations for each PC or IC

Stage 5

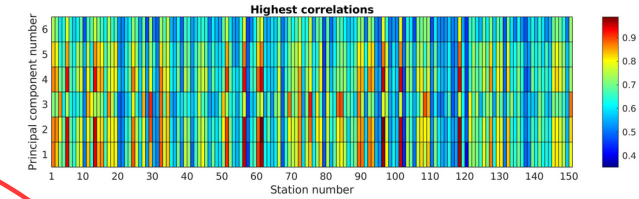
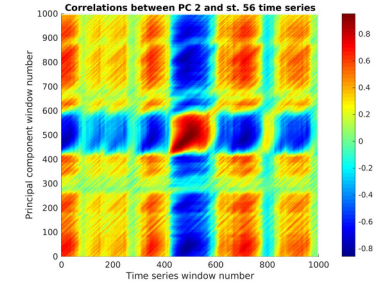
Component selection

PC or IC selected and corresponding stations

Stage 6

Spatial consistency check

Onset time, duration, and detected stations



Cluster for each PC									
	PC 2	PC 3	PC 4	PC 5	PC 6	PC 7	PC 8	PC 9	PC 10
Stations in cluster	B914 BN08 HLPN IMCH PECL PLVP SAAV	CGSJ CHMA PVCA	SAAV	CLL1 CMBA LSCH PAZU TAM3	LME2	PATH TMCO	CHEN	BN08 SAAV	ILOC
Onset times	481 485 489 484 482 496 496	693 712 700	745	646 655 667 652 660	212	343 342	233	525 525	599