

Although real ground deformation data for the Wuxi area cannot be obtained, this paper verifies the accuracy of PS-InSAR by extracting temporal displacement data from Sentinel-1 satellite datasets I and II for the same period. The specific imaging parameters and characteristics of the datasets are shown in Table S1.

Table S1. Specific parameters of sentinel-1A datasets.

Datasets	Dataset I	Dataset II
Incidence angle	42.8°	42.8°
Beam mode	IW	IW
Flight direction	Ascending	Ascending
Polarization	VV	VV
Time range	2015.12-2018.12	2016.12-2017.12

In this research, Datasets I and II were separately subjected to the PS-InSAR processing to acquire two sequences of time-series displacement data. Extracting and comparing the displacement data from the same time span in Datasets I and II reveals that both their deformation trends and magnitudes are closely aligned. The scatter plot, as shown in Figure S1c, indicates a correlation coefficient of 0.69, with an average error in cumulative displacement of 3.673mm and a standard deviation of 4.486mm, which directly substantiates the widespread consistency of the two sets of results.。

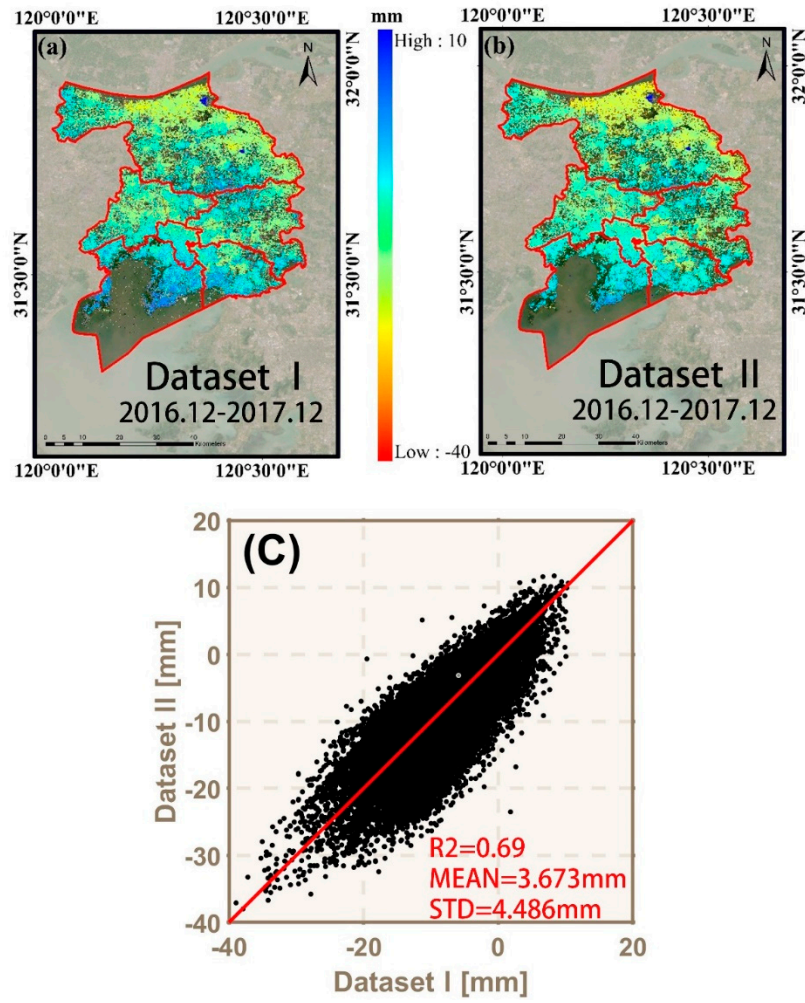


Figure S1. Cross-validation results. The deformation magnitude of Dataset I during the period from December 2016 to December 2017 (a). The deformation magnitude of Dataset II during the same period (b). Scatter comparison between Dataset I and II (LOS direction) (c).