Natural Hazards and Earth System Sciences Discussions

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Comment on nhess-2021-35

Anonymous Referee #1

Referee comment on "Spatial and temporal subsidence characteristics in Wuhan (China), during 2015–2019, inferred from Sentinel-1 synthetic aperture radar (SAR) interferometry" by Xuguo Shi et al., Nat. Hazards Earth Syst. Sci. Discuss., https://doi.org/10.5194/nhess-2021-35-RC1, 2021

This paper evaluated the subsidence of Wuhan during 2015-2019 with Sentinel-1 InSAR dataset. They find the distribution of deformed areas are spatially correlated with engineering geological regions and rapid urbanization. Moreover, they discovered the time series displacements of karst areas are affect by the Yangtze water level variations. This research fits the scope of *NHESS* and I suggest a minor revision. My detailed comments are listed as follows:

- In Section 4.6ï¼□©Google Earth™ images are acquired at July 2013 and time-series analysis starts from 2015.4ï¼□Whether the construction date can be explained in detail in order to better explain the accelerated deformation(As described in line 252-257).
- Line 261, the authors proposed water level correlated displacement might exist in the first terrace. Can you show us some examples?
- The authors should carefully check the type errors. The legend and scale in subsidence rate map should be consistent (eg. section 4.5,4.6).
- Line 279, “The subsidence of HH1 might be dominant by construction activities.” After 2017-Dec, the interaction between river level changes and subsidence is not so remarkable at point HH1, can you describe the construction activities details or activities which were different from QL1?