

Nat. Hazards Earth Syst. Sci. Discuss., referee comment RC2  
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## **Comment on nhess-2021-35**

Anonymous Referee #2

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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-RC2>, 2021

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Land subsidence is one of most common geohazards. It is significant for monitoring the characteristics for city. This paper uses the time series interferometry technology to obtain the spatial and temporal subsidence characteristics in Wuhan city (China). The results indicate that the overall subsidence over Wuhan region is significantly correlated with the distribution of engineering geological regions. The results sound good. I recommend a minor revision. The detailed comments are as follows.

(1) In section 4.2, the InSAR measurements are compared with leveling measurements. Fig. 4a and 4b indicate a bit lower correlation value. Please make a detailed analysis for the reasons. The authors can present some detailed InSAR results for some typical leveling points.

(2) For the regions with larger deformation, the authors can add some field survey pictures (such as buildings with crack, road with cracks).

(3) In section 2.2, the authors should present a flowchart for the used time series InSAR method.

(4) In section 5.2, I think it is not necessary to compare the subsidence with river water level. According to the Fig. 13, I think the daily rainfall is more correlated with the nonlinear subsidence of points HH1 and QL1.

