Natural Hazards
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Discussions

Interactive comment on "Deformation characteristics and exploratory data analysis of rainfall-induced rotational landslide: A case study of the Zhutoushan landslide in Nanjing, China" *by* Weiguo Li et al.

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We appreciate your comments, which prompted us to improve the manuscript. Box plot, scatter plot, EDA and fitting method are just methods or tools to explore and analysis the landslide monitoring data. Ok, we agree with you that we will introduce these concepts in the manuscript. The data and evidence are not enough to support the conclusion of rainfall-induced rotating landslide. From figure 4 we can know that the rainfall has caused the displacements in horizontal, vertical and underground inclination, and according to figure 12, we can obtain the information of the displacement of

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the landslide: displacement quantity and direction. From figure 14, we can know the displacement of monitoring points that locate in different position of landslide in vertical direction. Combined with these figures, we can see that zhutoushan landslide is a rotational landslide. The data and evidence support the conclusion of rainfall-induced rotating landslide. Yes, the horizontal displacement could be calculated by N and W components, the azimuth direction is the same. Azi=arctan($\Delta Y/\Delta X$), we can know that the displacement quantity and direction from the Cartier coordinate system, so the azimuth need not to be calculated. The displacement quantity and displacement rate are different concepts. So we should explain it in our new version, thanks for your comments.
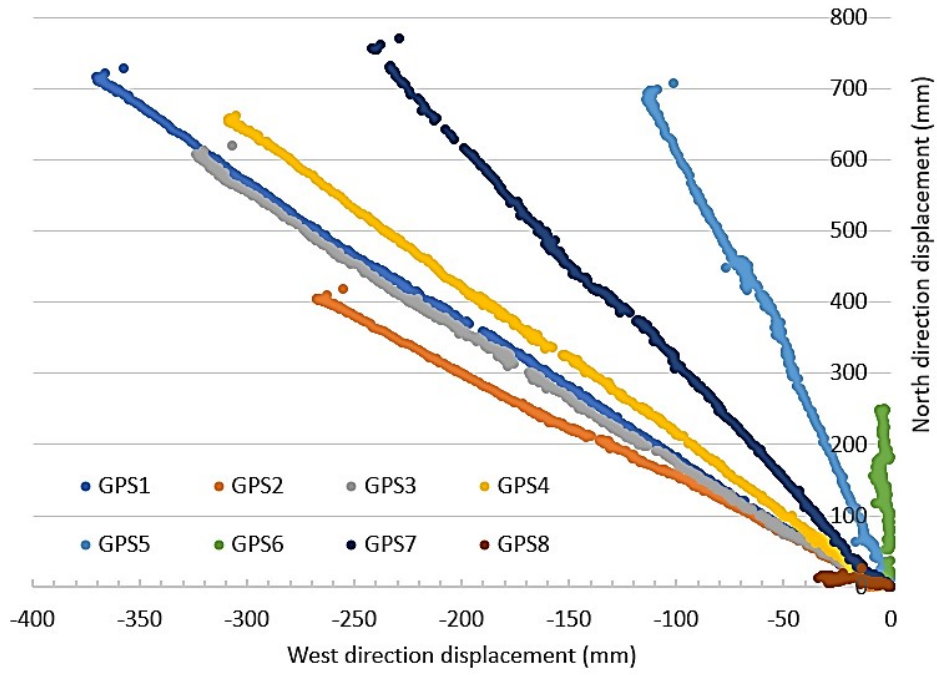
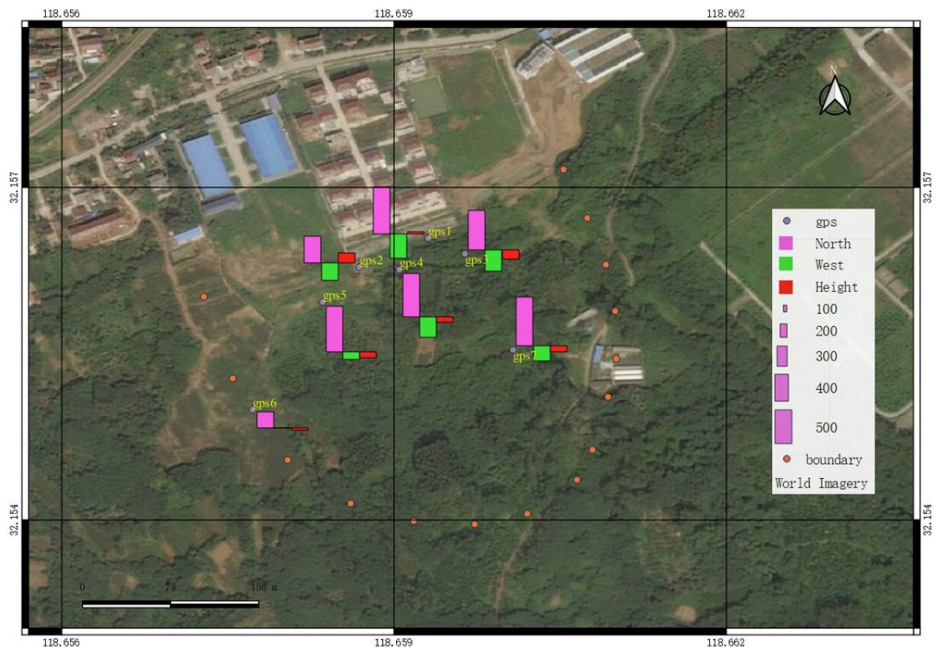**Fig. 1.** Figure 12 GPS displacement from July 14th 2017 to May 1st 2019.jpg

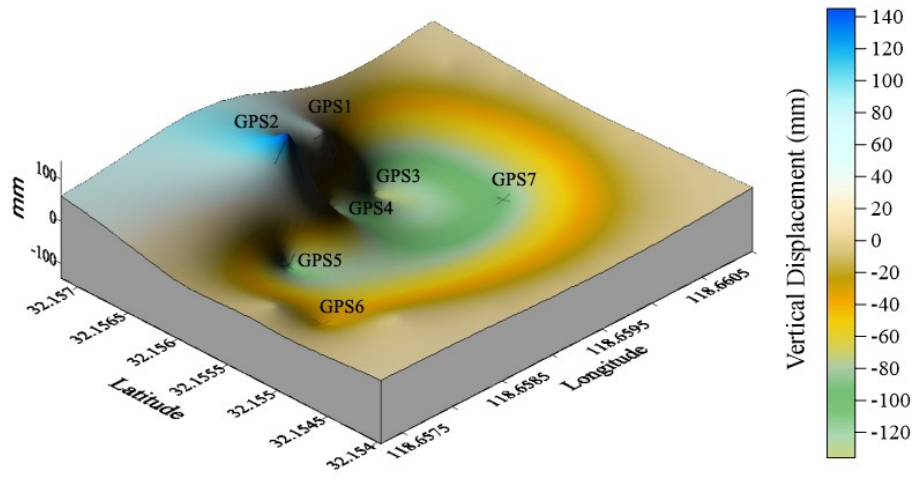C3

Fig. 2. Figure 13 Surface displacement visualization.jpg

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Fig. 3. Figure 14 3D graph on April 8th 2019.jpg

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