On behalf of all the authors, I would like to respond to each of the review comments proposed by Huali Pan.

Reply to comment 1. The abstract has been re-edited, and highlight the innovative aspects of the paper. Please read line 11-21.

Reply to comment 2. The introduction has been re-edited. The introduction describes the importance of material variability for the study of single landslide. Granite weathered crust slopes are composed of two layers of material. The study of the effect of material variability on the stability of single granite weathered crust slope is still lacking. Please read line 36-59.

Reply to comment 3. Based on the results of the field survey of granite residual soil thicknesses, a basis for the design of test thicknesses was provided. Please read line 128-133 and see Table 2.

Reply to comment 4. Please see Table 1 for the initial parameters of the test material.

Reply to comment 5. Detailed slope failure test procedure is provided. Please see Figure 5，6 and 7, and read line 182-206. Combined image analysis and sensor data analysis add key evidence of damage patterns. Please read line 300-333.

Reply too comment 6. More detailed maps of the site investigation were provided. The reliability of the test was verified by comparing the site survey maps with the test result maps. Please read line 429-235 and see Figure 15.

On behalf of all the authors, I would like to respond to each of the review comments proposed by Shun Yang.

Reply to comment 1. The abstract and introduction have been re-edited, and highlight the innovation of the paper. Please read line 11-21, line 57-63.

Reply to comment 2. The introduction has been re-edited. The introduction describes the importance of material variability for the study of single landslide. Granite weathered crust slopes are composed of two layers of material. The study of the effect of material variability on the stability of single granite weathered crust slope is still lacking. Please read line 36-59.

Reply to comment 3. Based on the results of the field survey of granite residual soil thicknesses, a basis for the design of test thicknesses was provided. Please read line 128-133 and see Table 2.

Reply to comment 4. Please see Table 1 for the initial parameters of the test materials. Detailed slope failure test procedure is provided. Please see Figure 5，6 and 7, and read line 182-206. Combined image analysis and sensor data analysis add key evidence of damage patterns. Please read line 300-333.

Reply to comment 5. In the discussion section, based on the experimental results and the nature of granite residual soil, the deformation and damage process of three types of landslides are summarized. Please read line 348-421.

Reply to comment 6. The rainfall infiltration process was first described based on the water content response. Please read line 247-271. The cause of the formation of rainfall infiltration patterns are then analyzed in depth. Please read line 272-293. The reasons for the formation of pressure responses were analyzed, and the relationship between pressure changes and deformation damage is explored. Please read line 300-336.

Reply to comment 7. More detailed pictures of the site investigation were provided. The reliability of the test was verified by comparing the site survey maps with the test result pictures. Please read line 429-235 and see Figure 15.

Finally, on behalf of all the authors, I would like to thank the reviewers and editorial staff. The article has benefited greatly from your work and professionalism.