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Interactive comment on "An improved approach to estimate large-gradient deformation using high resolution TerraSAR-X data" *by* D. Liu et al.

Anonymous Referee #2

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The authors have proposed an InSAR approach incorporated with offset tracing method by means of corner reflectors for large gradient deformation estimates. This is an interesting topic and a practice in large gradient deformation mapping. It has potential to be published after further development and investigation. There are also some arguing issues and items to be clarified.

Page 2764 line 20: it seems that "window 7 and 16" do not make sense for 2D filtering

Page 2765 line 18: better to list all 21 TSX image information

Page 2766 line 3: please rewrite this sentence correctly in a scientific manner

Page 2766 line 21: please state whether the GPS measurements were consistent with dates for satellite image captures

Page 2767 line 17: the meaning of "qualities" is unclear here; is it better "quantities" or "values" ?

Page 2767 line 19: should be "important"

Page 2767 line 27: should be "Xisan coal mine"

Page 2768 line 3: better read "were provided"

Page 2768 line 12: carefully rewrite those sentences

Page 2772 in Table 1: some parameters are not accurate as the nominal values, e.g., Frequency, Swath width... and how to define the precise orbit accuracy $\sim$10cm ?

Page 2773 in Table 2: please state what is the reason for the RMSE differences between CR1 and CR2? Whether are two CRs sufficient for this study?

Page 2774 in Figure 1: the diagram is too small

Page 2776 in Figure 3: better mark the region indicated by blue rectangle in Fig 2a

Page 2778 in Figure 5: it seems to reviewer that offset tracking method dominates the subsidence while the contribution from InSAR is almost negligible

In general the study looks like well designed and methodologies used are appropriate. However, discussions are not sufficient and also lack of completeness. Therefore the reviewer would suggest that the authors could take into account above comments and improve their manuscript with further investigation and clear descriptions.

Interactive comment on Solid Earth Discuss., 6, 2759, 2014.