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Abstract

A Study on Optimal D-InSAR Filtering Technique According to Landform Relief †

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† Presented at the 5th International Symposium on Sensor Science (I3S 2017), Barcelona, Spain, 27–29 September 2017.

Published: 18 December 2017

The InSAR technique measures the displacement of an indicator using SAR image interference. The technique of interfering two SAR images among InSAR techniques is called Differential InSAR (D-InSAR). In the process of D-InSAR, the filtering uses the Unwrapped Mask, usually the GoldStein method. However, since the Goldstein method removes the noise on the path, it is difficult to derive the displacement value in the agricultural area where the relative coherence is low. In Korea, more than 50% of the whole country consists of mountainous regions and agricultural regions, so it is difficult to use the Goldstein technique polysynthetically. In this study, we set the test-bed for the urban area and the agricultural area based on Coherence, and introduce Goldstein and Boxcar Filter. Through this process, we want to draw the conclusion which is displacement values in the agricultural area and urban area by two different filtering type. And we find that Boxcar have better efficiency than Goldstein at agriculture area, but in case of urban area, Goldstein method have better efficiency than boxcar filter.

Acknowledgments: This work is financially supported by National Research Foundation of Korea (NRF) as (BK21 Plus Creative Technology of Crisis, Disaster and Risk Management).