

Damage Analysis of 2008 Wenchuan Earthquake using SAR Images

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ABSTRACT

On May 12, 2008, Wenchuan earthquake (Ms 8.0) occurred in Sichuan, Southwestern China. This catastrophe caused severe damage of constructions in urban and rural areas, and fundamental infrastructure, such as those facilities of factories, electrical power, telecommunication and transportation, etc. The earthquake also resulted in many geological phenomena, i.e. landslide, debris flow, landslide lakes, etc. which also triggered off damage and threat. The airborne campaign was performed after the earthquake with high-resolution SAR system and aerial camera for rescue and relief effort and damage assessment. In this study, damage of various facilities was described and analyzed using airborne SAR images acquired during the campaign, as well as Japanese ALOS PALSAR data. The results were verified with ground truth investigation. The results shown the role of SAR data in earthquake damage assessment.

Key Words: Wenchuan earthquake, SAR, earthquake damage assessment