



Combining ASTER imagery with coherence from interferometric Synthetic Aperture Radar to derive debris-covered glacier boundary

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Most glaciers are covered by debris on their ablation areas in western China, which leads to some errors while delimiting their outlines with the application of optical remote sensing like ASTER imagery. We present this method to extract those glaciers boundary by combination of ASTER imagery with coherence of Synthetic Aperture Radar data interferometry (InSAR). The initial outlines of those glaciers are delineated by ASTER data and refined by using the coherence of the two SAR images to distinguish the moraine area from non glacier area such as bedrock area. The results were compared with that of the fieldworks and found well agreed. The uncertainties were discussed in the same time.