Using ASAR & ERS-2 to Detect a Moorland Fire Scar in the Peak District National Park

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Abstract
This research presents results to test the capability of ERS-2 and ASAR data to detect the 7 km$^2$ 18$^{th}$ April 2003 Bleaklow fire scar in the Peak District National Park (PDNP) in the UK against GPS, mapped just after the fire event. Archival time-series Synthetic Aperture Radar (SAR) imagery from the European Space Agency (ESA) was supplied by the Landmap Service, Mimas National Data Centre. Using SARscape 4.2 C-band ASAR and ERS 2 data were pre-processed to produce intensity and coherence images. The results of this research will report on (a) the affect of filtering methods during pre-processing to the image results (b) whether the fire scar exhibited a high level of coherence between images compared to the surrounding vegetation (Dahdal et al., 2009) (c) investigate the affect of spatial scale on the results when deriving land cover classes for analysis (d) investigate the affect of precipitation/groundwater on backscatter results.