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Investigating Montara platform oil spill accident by implementing RST-OIL approach.

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Oil Spills represent one of the most harmful events to marine ecosystems and their timely detection is crucial for their mitigation and management. The potential of satellite data for their detection and monitoring has been largely investigated. Traditional satellite techniques usually identify oil spill presence applying a fixed threshold scheme only after the occurrence of an event, which make them not well suited for their prompt identification. The Robust Satellite Technique (RST) approach, in its oil spill detection version (RST-OIL), being based on the comparison of the latest satellite acquisition with its historical value, previously identified, allows the automatic and near real-time detection of events. Such a technique has been already successfully applied on data from different sources (AVHRR-Advanced Very High Resolution Radiometer and MODIS-Moderate Resolution Imaging Spectroradiometer) showing excellent performance in detecting oil spills both during day- and night-time conditions, with an high level of sensitivity (detection also of low intensity events) and reliability (no false alarm on scene).
In this paper, RST-OIL has been implemented on MODIS thermal infrared data for the analysis of the Montara Platform (Timor Sea - Australia) oil spill disaster occurred in August 2009. Preliminary achievements are presented and discussed in this paper.