



Plans for the Sentinel-3 SLSTR Active Fire Product

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The Sea and Land Surface Temperature Radiometer (SLSTR) will fly on the ESA Sentinel-3 satellites as a follow-on to the highly successful ERS/ENVISAR (A)ATSR series of imaging radiometers. SLSTR has been designed to offer a series of new capabilities over and above those of the forerunner instruments (including an increased number of spectral channels, a much wider swath width, and an increased revisit frequency) whilst still maintaining the key characteristics of dual-view, high accuracy and high precision radiometry. Included in the SLSTR-design are two dedicated "fire channels" that will allow unsaturated thermal spectral radiance observations over even high intensity and/or large open vegetation fires. Data from these and the other spectral channels will be used to generate an operational near real-time SLSTR active fire detection and fire radiative power product, to be used for both scientific studies on wildfire causes, behaviour and effects, and also operational applications involved with forecasting the short-term atmospheric impact of wildfire smoke. This work will present the plans for the SLSTR fire product, including details of the algorithm design and performance analysis, and an evaluation of the ver1 algorithm using MODIS data of global fire events.