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# A system for near real-time detection of filament eruptions at Kanzelhöhe Observatory

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## Abstract

Kanzelhöhe Observatory (kso.ac.at) performs regular high-cadence full-disk observations of the solar chromosphere in the H-alpha and CaIIK spectral lines as well as the solar photosphere in white-light. In the frame of ESA's Space Situational Awareness (SSA) activities, a new system for near real-time H-alpha image provision through the SSA SWE portal (swe.ssa.esa.int) and for automatic alerting of flares and erupting filaments is under development. Image segmentation algorithms, based on optical flow image registration, for the automatic detection of solar filaments in real time H-alpha images have been developed and implemented at the Kanzelhöhe observing system. We present first results of this system with respect to the automatic recognition and segmentation of filaments and filament eruptions on the Sun.

**Keywords:** filaments, real time, image processing

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