



## **Segmentation of SOHO/MDI continuum and magnetogram images with the ASAP tool for SSI reconstruction**

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The variation of the solar spectral irradiance is an important driver for the energy balance in the Earth's atmosphere. There is real need for new imaging technologies that would enable us to detect different solar features and calculate their filling factors that are important for SSI reconstruction. Using the ASAP tool, developed at Bradford University, we identify the regions of the solar disk that are believed to be responsible for the SSI variations, these are sunspots umbra and penumbra, active regions, active and quiet network, and the quiet sun. The tools developed in this research were applied to the entire SOHO/MDI continuum and magnetogram images from mid 1996 till the end of 2010. Here, we present first results of the decomposed MDI images along with their segmentation maps and the reconstructed spectra.

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