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Reconstruction of solar magnetic activity using wavelets

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Solar magnetic fields vary on many time and spatial scales. Transients play an important role. Methods based on wavelet techniques are therefore particularly suitable. We will present scalograms of ampligrams that uncover transients. Solar synoptic maps provide an important visualization of global patterns. Maps are available of sub-surface flows, photospheric and coronal magnetic fields. We have carried out a multiresolution analysis of synoptic SOHO magnetograms. The aim of this study is to reconstruct solar activity from the variation found using wavelet techniques.