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SPOT-VGT reflectance time series of Europe in 2002 processed by HANTS

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SPOT-VGT reflectance images of greater Europe of the year 2002 have been processed by the HANTS (Harmonic ANalysis of Time Series) algorithm in order to quantify and visualise the dynamics of vegetation growth and snow cover. The HANTS algorithm combines curve fitting with cloud removal, and its output consist of a small number of Fourier components per pixel which describe the smoothed time series of one year. One can also synthesize the original time samples from the Fourier components, which are then cloud-free. The analysed images have been compared to digital elevation data and with the GLC2000 land use classification, all co-registered and at the same resolution of $1/112^{th}$ degree (~ 1 km in N-S direction). The data can be used for land use classification purposes and for the retrieval of biophysical parameters from the smoothed reflectance data. For this retrieval, a soil background reflectance map was constructed from a minimum vegetation map, in order to be used as a reference for the estimation of dynamic canopy LAI and fraction brown leaves.