



MEDOKADS - A 20 Year's Daily AVHRR Data Series for Analysis of Land Surface Properties

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To derive primary data products from raw AVHRR data, like spectral reflectances or temperatures, it is necessary to correct for sensor degradation and changing hardware specifications, to re-sample the data into a grid of equal pixel size, to perform geographical registration, cloud-screening and normalization for illumination and observation geometry. A data set which resulted from the application of these corrections is the top of the atmosphere Mediterranean Extended One-Km AVHRR Data Set (MEDOKADS) which now covers a period of 20 years. To study land surface processes, the obtained spectral data have to be combined, radiometric corrections for atmospheric effects, emissivity corrections in the case of temperature measurements have to be applied, and the variable over-flight times have to be accounted for. By application of complex evaluation schemes then higher level products are generated, like vegetation indices, surface albedo, and surface energy fluxes. The ultimate goal is to provide the users community with problem-related information. This includes the quantification of changes and the determination of trends. Methods and tools to reach this goal as well as their limitations are discussed. To validate the data, extended field measurements have been performed in which the scaling between local ground measurements and large scale satellite data play a major role. A major problem remains the application of atmospheric corrections because of the not well known variable aerosol content. The supervision of the quality of the derived information leads to the concept of anchor stations at which surface and atmospheric properties should permanently be measured.