

**Report of the use of Armagh Observatory meteorological data- Total cloud amounts.**

**Use: Environmental Protection Agency (EPA) funded study on satellite remote sensing of vegetation seasonality in Ireland**

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Total cloud amounts corresponding to the months of the vegetative growth season (March to November) for the years 2005, 2006 and 2007 were used in an exercise to look at temporal trends in cloud cover over one of the cloudier parts of the island of Ireland, i.e. Armagh. This exercise forms part of a wider study on the potential of remote sensing satellites to monitor spatial and temporal trends in vegetation seasonality in Ireland. As cloud presents a significant obstacle to satellite detection of land surface processes, this analysis forms an integral part of the study.

Daily cloud amounts were averaged over time periods ranging from 7 to 10 days and these averages were subject to interannual comparisons in order to find a year of the most standard cloud trends. The year (2006) was used for analysis of satellite-derived cloud trends in order to find an optimal period for the compositing of daily satellite scenes to minimise the amount of cloud in the imagery.

Results from this analysis will be presented at upcoming remote sensing conferences such as SPIE, Cardiff in September, 2008 and the Remote Sensing and Photogrammetry Society conference (RSPSoc), Exeter in September, 2008.