Geophysical Research Abstracts, Vol. 7, 02791, 2005 SRef-ID: 1607-7962/gra/EGU05-A-02791 © European Geosciences Union 2005



Tracking Ocean Currents from AVHRR global Area Coverage Imagery

S. Dransfeld, G. Larnicol, P.Y. Le Traon Collecte Localise Satellite, Toulouse, France sdransfeld@cls.fr / Phone: +33 561394834

Several studies have successfully applied a maximum cross correlation method to sequential AVHRR brightness temperature images in order to deduce oceanic current vector fields. The principle of the method consists of finding thermal patterns identified in one satellite overpass in the next satellite passage of the same area to calculate the displacement vector of each pattern. The method has already been shown to produce accurate vector fields for brightness temperature images of 1.1 km Local Area Coverage LAC resolution. This study applies the same method to sequential AVHRR images at 4.4 km Global Area Coverage GAC resolution to identify the accuracy of the resulting current vectors compared to the corresponding LAC vectors. The aim is to keep the inevitable degradation of the vectors resulting from a lower spatial resolution tracking minimal, to show whether the maximum cross correlation method can still be used to provide accurate current vectors on a global scale. Preliminary tests have shown promising results by keeping the accuracy change minimal. A longer time series of images will be built up so that current vector composites can be calculated and compared to altimeter and drifter data.