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## **Using Fast data fusion to develop high resolution climate quality sea surface temperature data sets from multiple space based data sources**

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Using a fast heirarchical method to estimator of the Kalman Filter to blend together sea surface temperature (SST) records from multiple satellite instruments to produce a high resolution SST analysis. The data that is used is the (A)ATSR multimission archive (Level 2 Meteo Product) and the AVHRR Pathfinder data from 1991 to 2005 inclusive. The method is used to reconstruct the both the North Atlantic and global regions. The analysis is a three stage process and these stages are compared for two different scenarios; one which only uses Pathfinder data and one which combines Pathfinder and (A)ATSR.

The results of these analyses are presented and intercompared. The method is computationally suitable for inclusion in ensembling techniques.