

High Resolution SST fields: the Medspiration project, analysis of 3 years of data

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In 2002, GODAE (Global Ocean Data Assimilation Experiment) initiated the GODAE High Resolution SST Pilot Project, GHRSSST-PP to address an emerging need for accurate high resolution sea surface temperature (SST) products (1). SST is required by operational ocean and atmospheric forecasting systems to constrain the modeled upper ocean circulation thermal structure and for exchange of energy between the ocean and atmosphere. The goal is to combine all the available SST data from across the globe to form a high resolution, high accuracy and high availability SST product. It is organized as a partnership between regional groups responsible for generating SST products, to a common specification, within a limited geographical area. The primary task of the Regional Data Assembly Centers is to collate all level 2 satellite SST measurements within their region, perform quality assessment and reissue the data in a common format (GHRSSST L2P data) including a measure of the quality of every measurement. Some centers also use the L2P data to produce global or regional analyzed SST products (called GHRSSST L4 data), using well defined procedures. Medspiration has been created by ESA in 2004 to serve as a European DAC for GHRSSST-PP, generating L2P and MDB products for the Atlantic Ocean and its adjoining seas (2). Medspiration has also the task of producing an ultra-high resolution (2 km) analyzed SST product for the Mediterranean Sea. The Medspiration system is operational for the European Seas since 2005 and after a test period the processing chain has been stabilized beginning of 2006. Two years of data (2006-2007) have been produced with only minors processing changes. This archive provides a good opportunity to evaluate and to analyzed the interest of ultra high resolution analyzed SST fields.

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