



Retrieving sea surface salinity from La Plata campaign microwave STARRS data

C. Gabarró (1), J. Font (1), J. Miller (2,1)

(1) Institut de Ciències del Mar CSIC, Barcelona, Spain, (2) U.S. Office of Naval Research Global, London, UK (cgabarro@icm.csic.es)

La Plata campaign took place during August 2003 and February 2004 in the La Plata river mouth area, where a considerable amount of freshwater is discharged and produces an extraordinary impact over the continental shelf of northern Argentina, Uruguay and southern Brazil. The campaign consisted in a large-scale oceanographic survey (salinity, temperature, wind speed) and an airborne survey with STARRS (Salinity Temperature and Roughness Remote Scanner) microwave radiometer, owned by the Naval Research Laboratory (NRL), USA. Radiometric data from La Plata campaign have been processed and analyzed. Sea surface salinity information has been retrieved from them, and changes in the retrieved salinity have been observed in accordance with changes in the measured in situ values. A semi-empirical model to describe the impact of roughness on sea surface emissivity (depending on wind speed and significant wave height) appears to produce the best results. This model was derived in the NW Mediterranean during a campaign in autumn 2001 (WISE, Wind and Salinity Experiment) in preparation for the European Space Agency SMOS (Soil Moisture and Ocean Salinity) mission.