

The Second SIMBIOS Radiometric Intercomparison (SIMRIC-2), March-November 2002

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Abstract

The second SIMBIOS (Sensor Intercomparison and Merger for Biological and Interdisciplinary Oceanic Studies) Radiometric Intercomparison (SIMRIC-2) was carried out in 2002. The purpose of the SIMRICs is to ensure a common radiometric scale among the calibration facilities that are engaged in calibrating *in-situ* radiometers used for ocean color related research and to document the calibration procedures and protocols. The SeaWiFS Transfer Radiometer (SXR-II) measured the calibration radiances at six wavelengths from 411nm to 777nm in the ten laboratories participating in the SIMRIC-2. The measured radiances were compared with the radiances expected by the laboratories. The agreement is within the combined uncertainties for all but two laboratories. Likely error sources were identified in these two laboratories and corrective measures were implemented. NIST calibrations in December 2001 and January 2003 showed changes ranging from -0.6% to +0.7% for the six SXR-II channels. Two independent light sources were used to monitor changes in the SXR-II responsivity between the NIST calibrations. A 2% variation of the responsivity of channel 1 of the SXR-II was detected, and the SXR-II responsivity was corrected using the monitoring data. This report also presents a comparison of directional reflectance calibrations of a Spectralon plaque by different calibration facilities.