

A world map with a color-coded overlay representing satellite data, likely chlorophyll-a concentration. The colors range from dark blue (low concentration) to red (high concentration). The overlay shows higher concentrations in coastal regions and the equatorial zone.

SeaWiFS *In Situ* Matchup Analysis

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A world map with a color-coded overlay, likely representing satellite data. The colors range from blue (low values) to red (high values). The overlay is most prominent over the oceans, with some higher values in the North Atlantic and parts of the Pacific. The landmasses are shown in a lighter, semi-transparent color, allowing the underlying map to be visible.

Matchup Criteria

- Time and Space
 - ± 240 minutes
 - 3x3 pixel box; 5 of the 9 pixels valid
- Masks and Flags
 - Atmospheric correction algorithm failure
 - Land
 - Sun glint
 - Total radiance above the knee value
 - Large spacecraft zenith angle
 - Stray light
 - Clouds/Ice
 - Coccolithophores
 - Turbid water
 - Large solar zenith angle
 - Low $L_{WN}(555)$

Matchup Summary

- Data sets considered
 - Number of in situ stations 2289
 - Number SeaWiFS files tested 3076
- 5 of 9 valid pixels 878
- Eliminate duplicate coverage 97
- Pass stdev/mean test*

$L_W(412)$	80	$L_W(510)$	92
$L_W(443)$	90	$L_W(555)$	95
$L_W(490)$	95	Chlorophyll §	73

* SeaWiFS L_{WN} must be positive

\S Not all optical stations provided chlorophyll measurements

Matchup Statistics

	SeaWiFS/In Situ	Std Dev	Range of In Situ Values
L_w(412)	0.887	0.376	0.053 - 1.967
L_w (443)	1.024	0.470	0.089 - 1.908
L_w (490)	0.989	0.417	0.162 - 3.381
L_w (510)	1.035	0.459	0.132 - 3.199
L_w (555)	1.136	0.605	0.059 - 3.198
Chlorophyll	1.362	1.035	0.027 - 4.650

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A world map with a color overlay, likely representing sea level anomalies or oceanographic data. The colors range from blue (low) to red (high), with a prominent red area in the North Atlantic and another in the Indian Ocean. The map is centered on the Atlantic Ocean.

The Future for Matchups

- Implement MSL12 in place of ANLY
- Retain pixel level information
- Implement strategy for along-track data sets
- Generalize
 - In situ file format