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http://simbios.gsfc.nasa.gov/

**Program Objectives**
Specific objectives are:
1. quantify the relative accuracies of the products from each mission,
2. work with each project to improve the level of confidence and compatibility among the products,
3. develop methodologies for generating merged level-3 products.

**Instruments**
SIMBIOS has identified the primary instruments to be used for developing global data sets. These instruments are:
- SeaWiFS
- MODIS
- POLDER (ADEOS-I and II)
- MERIS (Terra and Aqua)
- MERIS
- GLI
- OLI

The products from other missions (e.g., OCT, OSTM, and the two MOS aerosols) will be tracked and evaluated, but not considered as key data sources for a combined global data set.

**Project Organization**
The SIMBIOS approaches include the SIMBIOS Project Office at the Goddard Space Flight Center and the individual Science Teams. The Science Team is labeled as SIMBIOS Research Associate (SIMBIOS NRA). The Project team represents US government and universities with several international organizations, space agencies (e.g., NASA, CNES), and commercial organizations (e.g., NASA, ARO, US), in addition to instrument or program owners that maintain or invent radiometers used in mission data validation activities. SIMBIOS is one of the leading programs in the field of remote sensing applications, ocean color, and methodologies for data merger schemes. The locations of specific SIMBIOS team participation can be seen in Figure 1.

The Project Office provides support and coordination for the SIMBIOS Project as well as administration, project documentation, and international collaboration, and in particular, ocean color instrumentation; measurement protocol experiments, round robin, algorithm development and evaluation, product merging, and data processing.

**Satellite Data Processing**
The data processing facility is operational and is scaled for limited data storage (in one and satellite), product generation, and satellite support as required by the SIMBIOS specific investigations.

**Data Product Validation**
- The SIMBIOS project products a broad and accurate collection of satellite-instrument and ancillary data are available for the various satellite missions. The satellite data processing from additional missions are available, as are the POLDER data. These data include the POLDER data and the SeaWiFS data as well as the GLI data.
- Validation is the process of determining the spatial and temporal error fields of a given biological or geophysical data product and includes the development of comparison or match-up data sets, i.e., validation is the process of mapping these two datasets. In the present case, the SeaWiFS data are compared with the POLDER and GLI data.
- Data merging and compatibility among the various satellite missions, to complement their activities with additional analyses or alternative approaches, is being considered. Data merging algorithm leaving radiance, primary productivity, etc., which is being considered.
- Data merger algorithm development and evaluation, product merging, and data processing.

**Additional Reading**

**Figures**
- Figure 1: Overview of the SIMBIOS Project
- Figure 2: SIMBIOS Science Team PIs (NRA-96)
- Figure 3: International Collaboration 99-99
- Figure 4: Bio-optical & Atmospheric Data Submitted to SeaBASS
- Figure 5: SeaWiFS-MOS Comparison
- Figure 6: Data Merger
- Figure 7: OCTS L1c MOS, 1996, MOSY Site
- Figure 8: OCTS L1c MOS, 1996, MOSY Site
- Figure 9: OCTS L1c MOS, 1996, MOSY Site
- Figure 10: OCTS L1c MOS, 1996, MOSY Site
- Figure 11: Atmospheric Data Submitted to SeaBASS
- Figure 12: Atmospheric Data Submitted to SeaBASS
- Figure 13: SeaWiFS SeaSAR Overlay, 23 March 1999
- Figure 14: SeaWiFS/MOS Comparison
- Figure 15: SeaWiFS/MOS Comparison