GODAE High Resolution SST (GHRSST) Science Team

TERMS OF REFERENCE

PREAMBLE

The International Global Ocean Data Assimilation Experiment (GODAE) Steering Team (IGST) has concluded that, for its goals, a significant enhancement of the presently available sea surface temperature (SST) data stream and products is required. In particularly, it noted that the temporal and spatial resolution of existing data sets and products did not meet the requirements of GODAE. The IGST also noted that there were many other requirements for SST products that were not being satisfied as well as they should be.

There are a variety of *in situ* and remote methods for sampling the surface temperature of the ocean. Some of these techniques sample just the thin surface skin while others measure temperature at some depth below the surface. The physics of temperature variability near the surface are extremely complicated and there is no simple relationship between the different sampling strategies, even under ideal conditions (a well-mixed near surface layer).

There are also many different platforms available for gathering surface temperature information, some maintained operationally and others undergoing development and testing. It is clear that our present techniques for assembling and analyzing these data are far from optimum and that, as a result, we compromise both the coverage and quality of the products provided to users.

GODAE convened a Workshop in November 2000 to consider a Prospectus for a GODAE high-resolution SST Project. The participants of the Workshop concluded that the scientific and technical prospects for a significant enhancement of presently available SST products were excellent and that a High-Resolution SST Pilot Project (the GODAE SST Pilot Project) should be formed under GODAE. A Science Team sponsored by GODAE that would oversee the drafting of a detailed strategy and Implementation Plan would guide the Project.

The following Terms of Reference have been agreed for the Science Team:

(i) Based on the conclusions of the Workshop, develop a set of objectives/goals and a Strategic Plan for the GODAE SST Pilot Project;

(ii) Based on the actions agreed at the Workshop, develop an Implementation Plan for the GODAE SST Project including (a) a set of objectives and strategy, as developed under (i), (b) a set of actions and work to be undertaken by the Project, (c) a schedule for actions and work, and (d) a defined set of outcomes. As agreed at the Workshop, the actions shall include testing and validation of sea temperature measurements, assembly of sea temperature data sets and associated data exchange and serving, analyses of data, and required research and development.

(iii) Provide scientific guidance to, and as appropriate receive advice from, the International GODAE Steering Team on the scientific and technical issues associated with the implementation of the Project and on the use of products by GODAE.

(iv) Develop an international consortium to undertake the development and implementation of the Project, including its final transition into an operational system.

(v) Provide advice and guidance on scientific and technical innovations relevant to the Project.

(vi) Liaise as appropriate with other groups associated with the global ocean observing system, including the SST Working Group and Surface Flux Project (SURFA) of the Ocean Observations Panel for Climate.

(vii) Provide regular reports on progress to the International GODAE Steering Team.

SCIENCE TEAM (June 2002)

Craig Donlon	(Chair; EC JRC, Italy: radiometer m'ments, satellite m'ments)
Bill Emery	(U. Colorado, USA: radiometer and other in situ m'ments)
Hiroshi Kawamura	(Tohoku University/NASDA EORC; Japan, Satellite SST and coastal applications)
Jim Cummings	(NRL, USA, operational use)
Ian Robinson	(SOC, UK: all rounder)
Pierre le Borgne	(SAF, Meteo France: operational high-resolution products)
Peter Minnett	(RSMAS: Pathfinder, Satellite products)
Ian Barton	(CSIRO, Aust.: ATSR, radiometer m'ments)
Nick Rayner	(Met Office, UK, climate user perspective and liaison to climate SST WG)
Chelle Gentemann	(RSS, USA, Microwave satellite SST)
Chris Mutlow	(RAL, UK, IR satellite measurements)
Gary Wick	(NOAA: data marging and anlysis)
GODAE Representative	(N. Smith or P. Traon)
Andrew Harris	(NOAA: Data merging and analysis, radiative transfer modelling)
Ed Armstrong	(JPL PO.DAAC: Data management and product serving)
Joge Vasquez	(JPL PO.DAAC: Data management and product serving)
Ken Casey	(NOAA: Global SST data production and analysis)