Underwater optics: measurement, interpretation and implications for modelling marine processes.

Organisers: Alex Cunningham, University of Strathclyde, Glasgow
Alejandro Souza, Proudman Oceanographic Laboratory.
Venue: Glasgow
Dates: March 16th and 17th 2009

Workshop description.

This workshop is concerned with the measurement and modelling of underwater light fields and the study of optically significant seawater constituents. These topics provide a physical basis for the development of optical remote sensing algorithms, but the workshop is not concerned with remote sensing *per se*. It will be structured in order to:
1. review the existing state of the art of active and passive optical measurement techniques, particularly those suited for deployment on moorings, AUVs and gliders.
2. devise protocols for generating standardised products from optical data suitable for archiving and dissemination within the wider community.
3. identify emerging requirements for optical measurements and modelling within Oceans 2025.
4. explore possible mechanisms of cooperation (for example through joint research proposals, participation in cruises, and communication of results) and to identify mechanisms under NERC *Next Generation Science for Planet Earth* to further the understanding of the interactions between optics and primary productivity in the oceans

Objectives.

The immediate objectives are:

- to raise awareness of the potentially significant contribution of optical measurements to the Oceans 2025 science programme.
- to identify and resolve technical issues concerning the deployment of optical instruments on board ship and *in situ* and to reduce uncertainties in the interpretation of the measurements obtained.
- to evaluate the suitability of existing underwater light field models for calculating rates of photochemistry and photosynthesis.
- to encourage the incorporation of scientifically rigorous optical measurements in marine research.

Participation.

We envisage a workshop with a maximum of 25 participants: 10 from Oceans 2025 laboratories, 10 from UK Universities, 3 from other UK institutes and 2 visitors from overseas. Applications for invitations, with a short description of your area of interest, should be sent to Alex Cunningham (a.cunningham@strath.ac.uk) before February 23rd 2009.