



## **Vicarious adjustment of MERIS reflectances using an inverse technique**

M.E. McCulloch (1,2), K.L. Barker (2), and M. Ondrusek (3)

(1) University of Plymouth, Plymouth, PL4 8AA, UK (mike.mcculloch@plymouth.ac.uk), (2) Argans Ltd, Tamar Science Park, Plymouth, UK., (3) NOAA, NESDIS, Silver Spring, MD 20910, USA.

The method that has been used for the vicarious adjustment of the SeaWiFS ocean colour data relies on the assumptions that the water-leaving radiance is negligible in the Near Infra-Red (NIR) in oligotrophic waters, and that the longest NIR band is perfectly calibrated. In this paper a novel approach to vicarious adjustment is proposed that does not require these assumptions: a least-squares inverse technique is used to adjust atmospheric variables and MERIS reflectances within their error bars to obtain a best fit to the buoy observations at all wavelengths. A simple example will be presented using match-up MOBY (Marine Optical Buoy) observations from MERMAID (the MERis MAtch In-situ Database).