

## JCOMM Technical Workshop on Wave Measurements from Buoys

The JCOMM Expert Team on Wind Waves and Storm Surges (ETWS) has recommended that the network of *in situ* wave observations from moored and drifting buoys be enhanced, particularly for offshore locations and in the tropics and southern ocean. This is essential in order to provide more balanced geographical coverage, and therefore more representative statistics, for application in the following key areas: (1) assimilation into offshore wave forecast models; (2) validation of wave forecast models; (3) calibration and validation of satellite wave sensors; (4) ocean wave climate and variability; (5) role of waves in coupling.

The 22<sup>nd</sup> Session of the Data Buoy Cooperation Panel (DBCP) in La Jolla, USA in October 2006 supported this requirement in principle, and updated its Implementation Strategy encompassing the development of appropriate cost-effective technology to meet this requirement. In order to enhance the wave measurement networks, the DBCP agreed to work with the ETWS to develop and implement a plan.

In addition, the 9<sup>th</sup> and 10<sup>th</sup> International Workshops on Wave Hindcasting and Forecasting ([www.waveworkshop.org](http://www.waveworkshop.org)) identified several technical issues related to existing wave measurements from moored buoys, including differences in measured waves from different platforms, sensors, processing and moorings. In particular, a systematic 10% bias was identified between US and Canadian buoys, the two largest moored buoy networks. E-SURFMAR buoys have recently measured two occurrences of significant wave height greater than 17 m west of Ireland, including the highest wave ever measured by a buoy at 18.3 m.

As a result of these discussions, it is proposed to organize a two-day workshop on wave measurement in late September/early October 2008 in the northeast United States.

The objectives of the workshop are:

- to provide a forum for the exchange of ideas and information related to wave measurement from moored and drifting buoys, taking into consideration the users requirements;
- to discuss priorities for the development of cost-effective wave observing technology;
- to develop a technical work plan for implementation of enhanced global wave measurements, for consideration by the DBCP and its Action Groups;

The workshop will be organized jointly by the JCOMM Data Buoy Cooperation Panel and Expert Team on Wind Waves and Storm Surges. It is expected that there will be about 20-30 participants at the workshop, including representation from the DBCP and ETWS; national and regional wave monitoring agencies including the US National Data Buoy Center and US Army Engineer Research and Development Center, E-SURFMAR and Environment Canada; Ocean Sites; the International Association of Oil and Gas Producers; research institutes including the Scripps Institution of Oceanography; and buoy manufacturers. These participants encompass expertise in wave measurement technology, operational wave forecasting and hindcasting, wave climate, and observational systems, as well as users and providers of wave information.

The workshop will be comprised of a few keynote presentations from selected experts, plus in-depth discussion sessions focused on topics of significant interest including (1) requirements for wave observations; (2) existing technology and their limitations; (3) operational aspects; (4) potential for new cost-effective technology for drifters and moorings; (5) workshop work plan.

The results of the workshop are expected to provide the basis for a discussion item at the 24<sup>th</sup> session of the DBCP with a technical work plan for implementation of enhanced spatial and temporal coverage of wave measurements on a global basis and assessment of existing and future wave measurement technology.

A workshop web page has been set up at <http://www.jcomm.info/WaveBuoys>. Updated information will be provided through the web site as it becomes available, including the precise location and dates for the workshop, as well as the program and logistics.