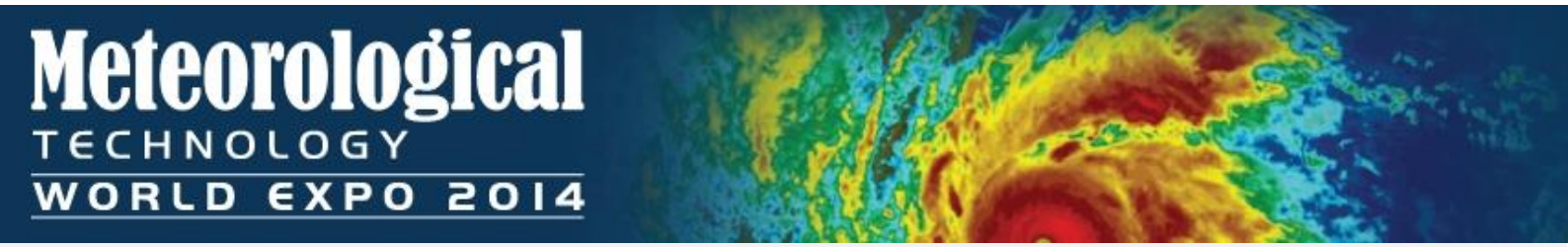
WERA
Ocean Remote Sensing



Breakout Session

Meteorology developments used in marine application

Wednesday – October 22 – 15:30 to 16:00 PM

Michal Weis / Thomas Helzel

Coastal Radar WERA to support met ocean forecasting for coastal zones

The HF-Coastal Radar "WERA" is a shore based remote sensing system to monitor ocean surface currents, waves and wind direction. This very reliable long range (up to >200 km) monitoring system provides reliable data maps of the coastal zone with high spatial and temporal resolution. These data are used for decision makers to optimize coastal zone management and planning and in case of emergencies it can be used to support hazard management.

In addition to use just the real-time monitoring, a special forecasting mode can be activated providing predictions of ocean currents and waves for the next hours.

Due to the outstanding accuracy of the radar the acquired data can be assimilated into numerical oceanographic models. This technique provides reliable forecasting of ocean currents and waves for coastal zones for more than 36 hours. The data output format can be adapted to user specific requirements. The standard GRIB output is used as input for the IBL Visual Weather Interface.

The same tool can be used for backtracking a monitored oil spill and estimate the origin to identify the polluter. Furthermore the improved numerical models can be used to provide more reliable metocean forecasts (sea states and currents) to be used by ferry operators. Data and experimental results from the French coast demonstrate the efficiency of these instruments.

Results of various experiments with drifters to simulate a drifting persons or containers show the significant improvement of the drift prediction, when using real-time current data provided by radar systems instead of using results from numerical models only. This improved quality of the drift prediction can be very useful for various applications.

These systems are already used by several Meteorological Institutes and Hydrographic services, some samples are shown.

Your contact persons:

Thomas Helzel
Helzel Messtechnik GmbH

BOOTH 4060

together with
IBL Software Engineering

ibl

http://www.meteorologicaltechnologyworldexpo.com/index.php