

## **Wave forecast and its implications for the tidal forecast in the Northern Adriatic Sea**

L. Bertotti

CNR, Venice, Italy (luciana.bertotti@ismar.cnr.it)

Since the '80s a tidal forecasting system is operational in the Adriatic Sea, with focus in the area offshore the Venice lagoon and at the town itself. The system provides valuable information several days in advance, with accuracy of the order of 10 cm. or less at one or two day distance.

Since the '80s it was also realized that, the sea level in front of Venice, hence also in the lagoon, is dependent through the set-up process, also on the wind wave conditions.

As a consequence ISMAR and ICPSM (the centre responsible for the tidal forecast) have set up and are jointly managing a high resolution wave forecast system in the Adriatic Sea. The input is provided by the ECMWF wind fields suitably corrected for the underestimate via a long-term established procedure. The grid resolution is  $1/12^\circ$  covering the whole Adriatic Sea. The time horizon is 3 days, with 5 days considered on an experimental basis. Regular validation on the forecast values is done using the data routinely recorded at the ISMAR oceanographic tower, located 15 Km offshore, in front of the Venice lagoon, on 16 metres of depth.