

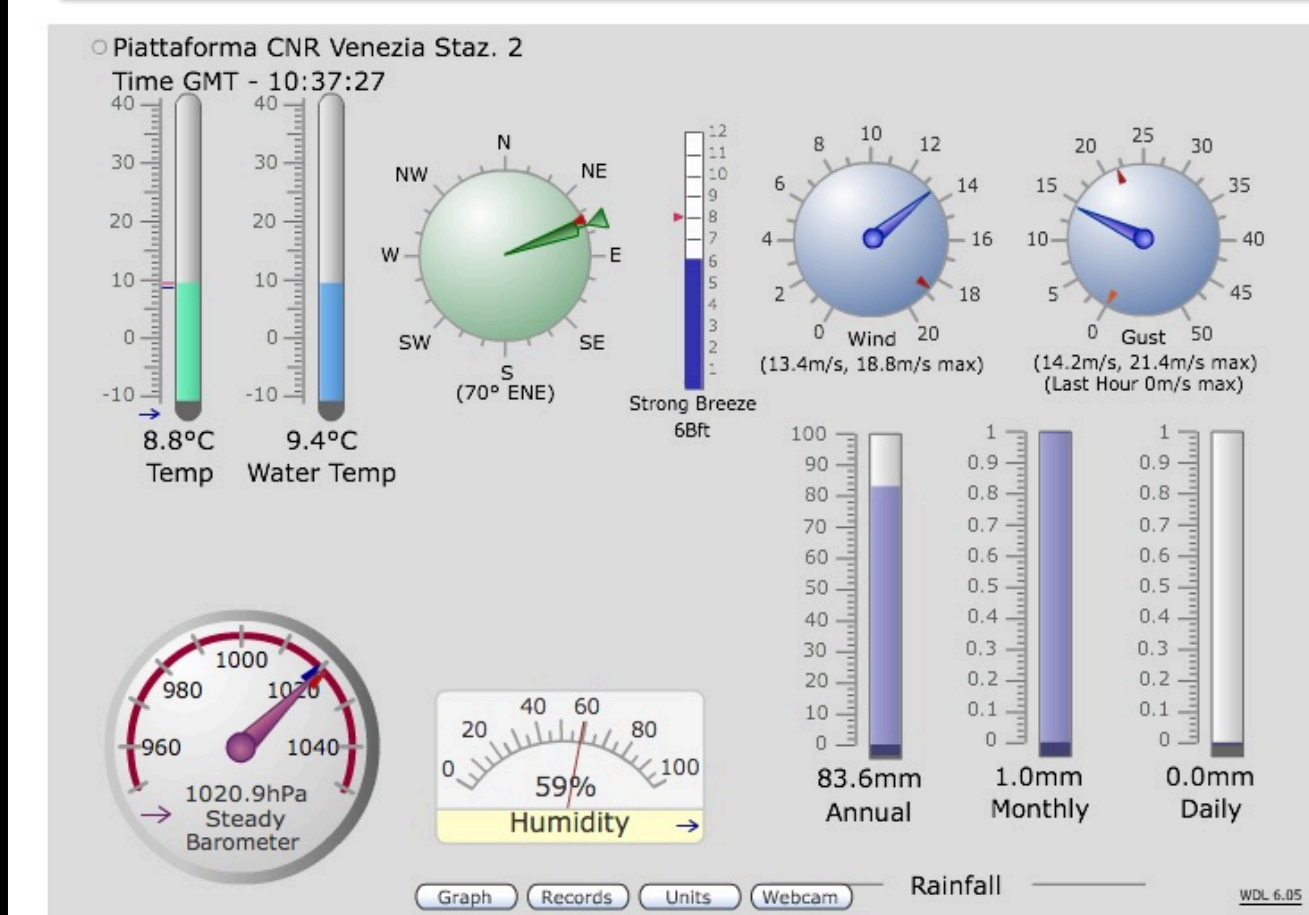
# Acqua Alta oceanographic tower after (almost) 50 years of research activity

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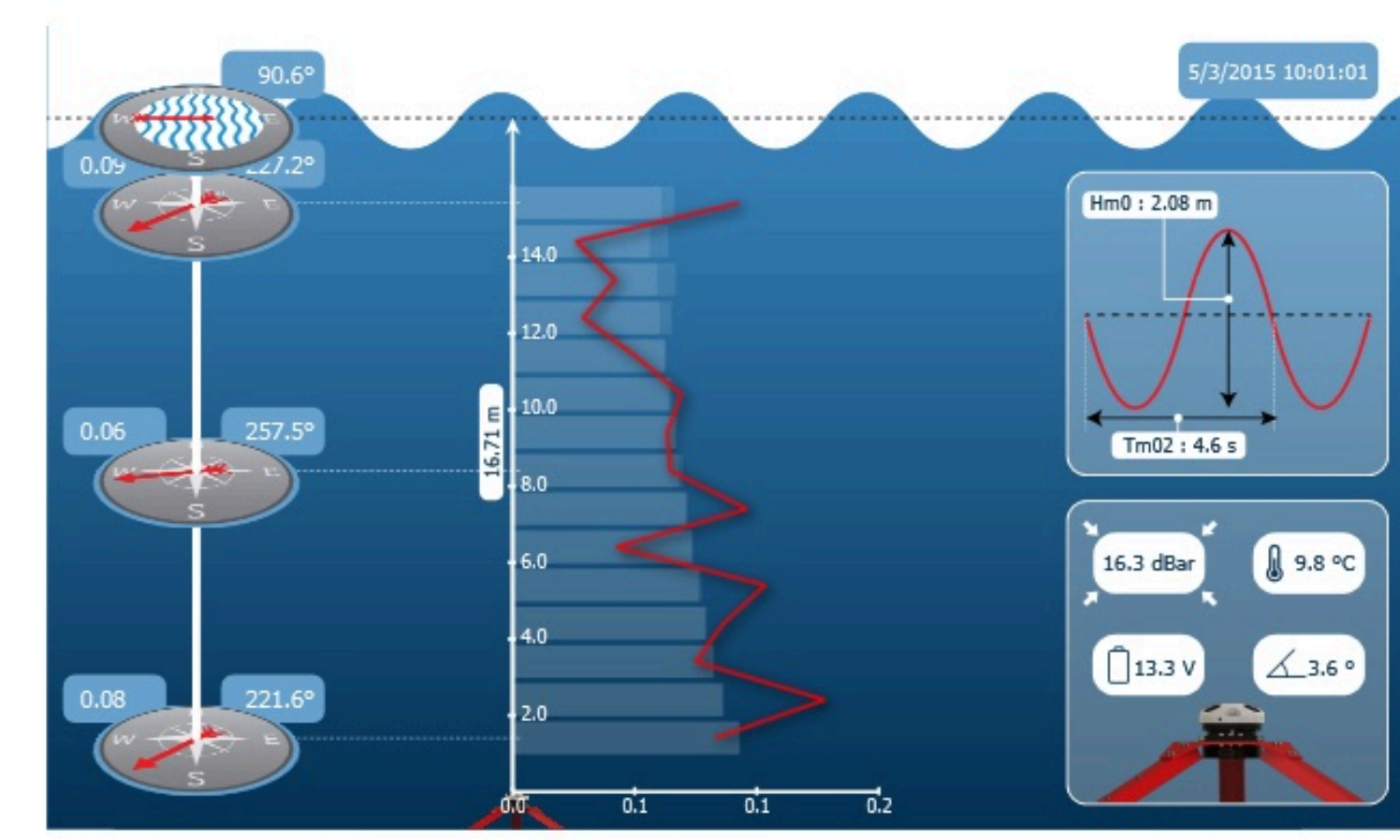
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## ATMOSPHERE, SEA SURFACE WAVES, CURRENTS, SURGE

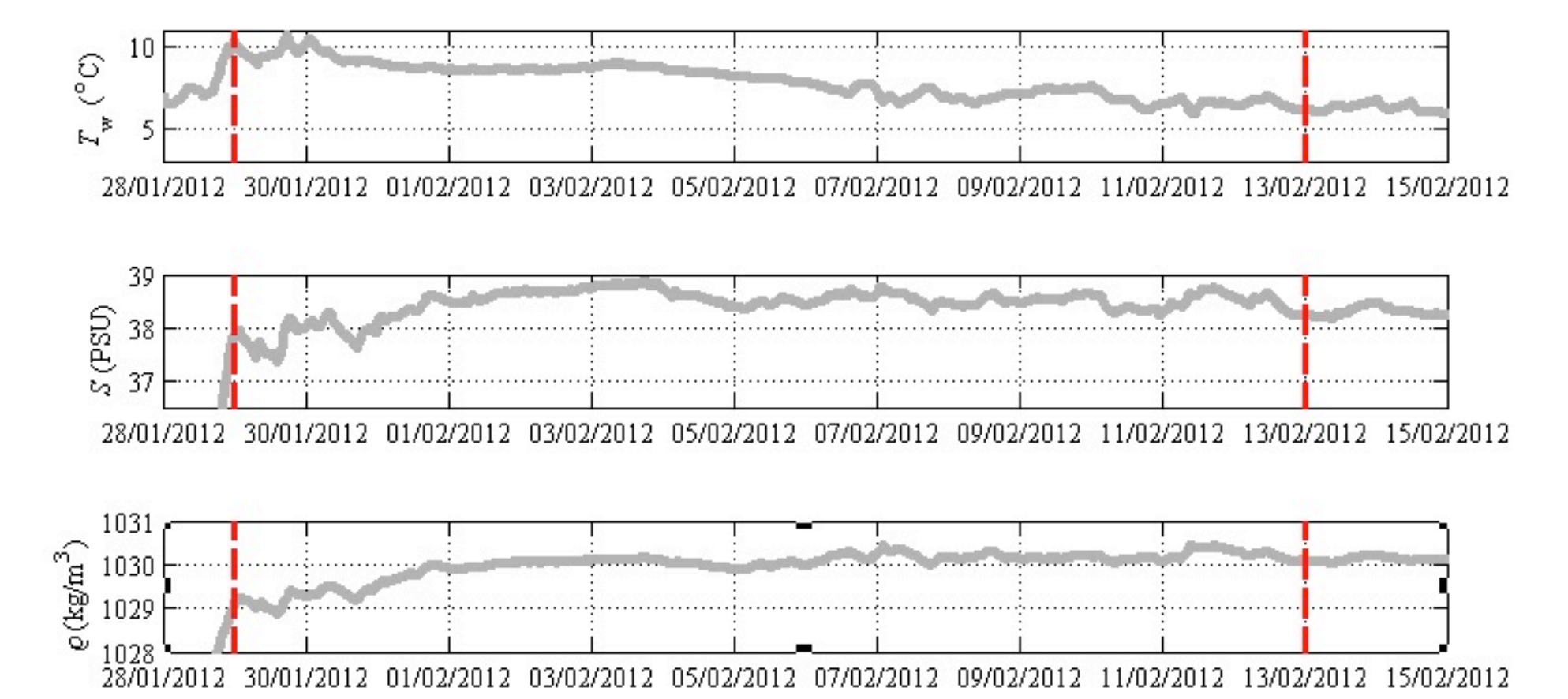


- Directional wave observation since 1979
- Surge level integrated with the High-Tide warning system of the city of Venice
- High frequency and Real Time delivery c data due to the fast data connection

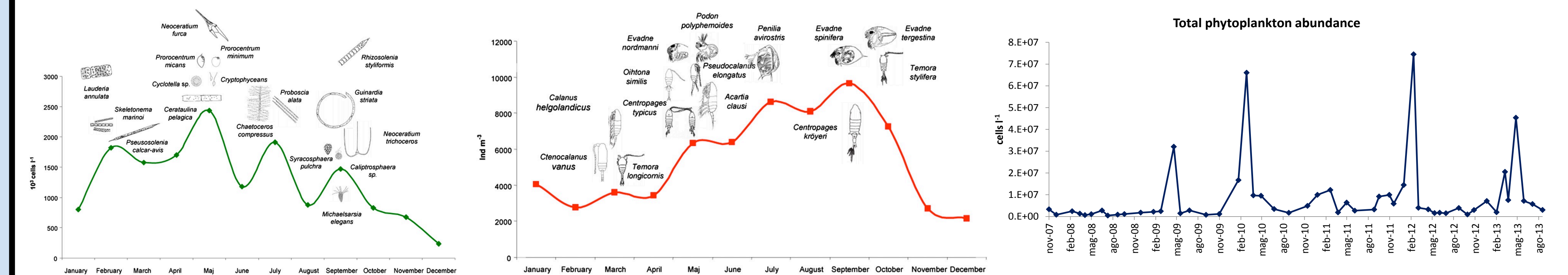


## HYDROLOGY

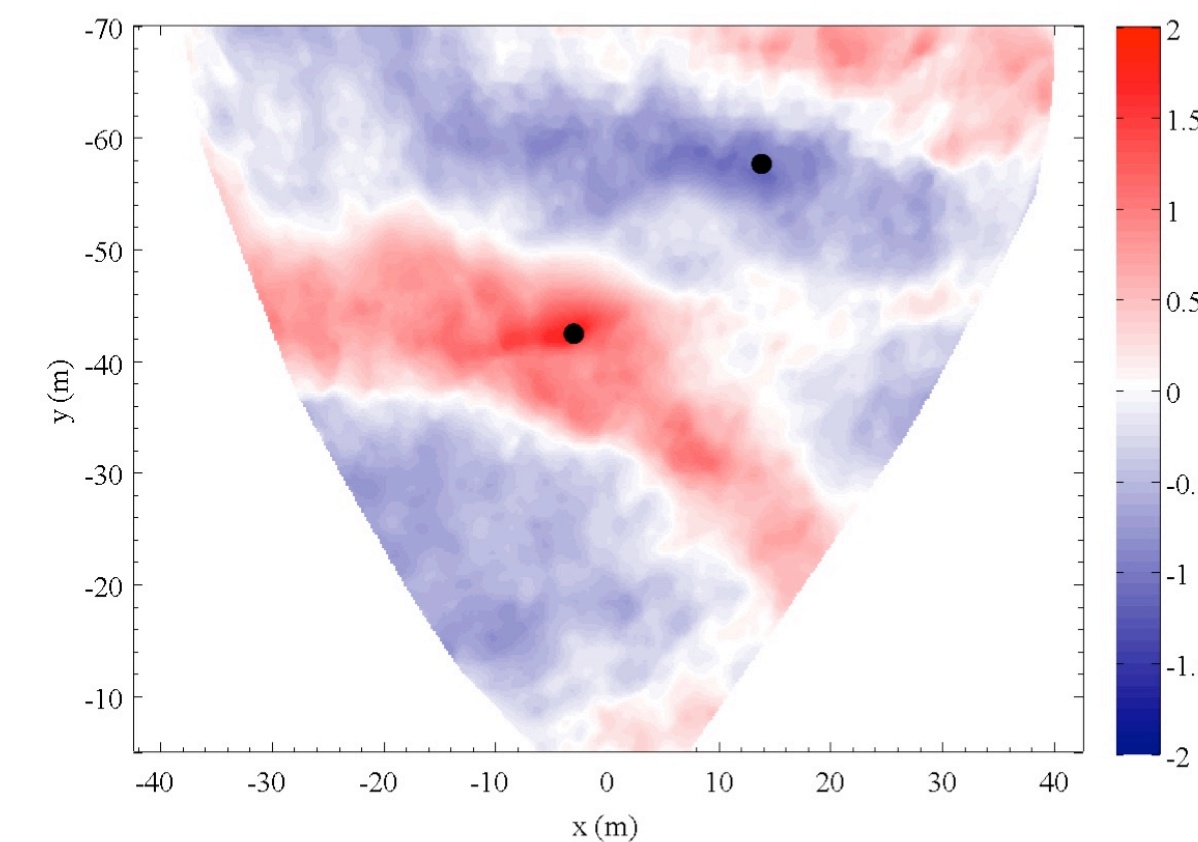
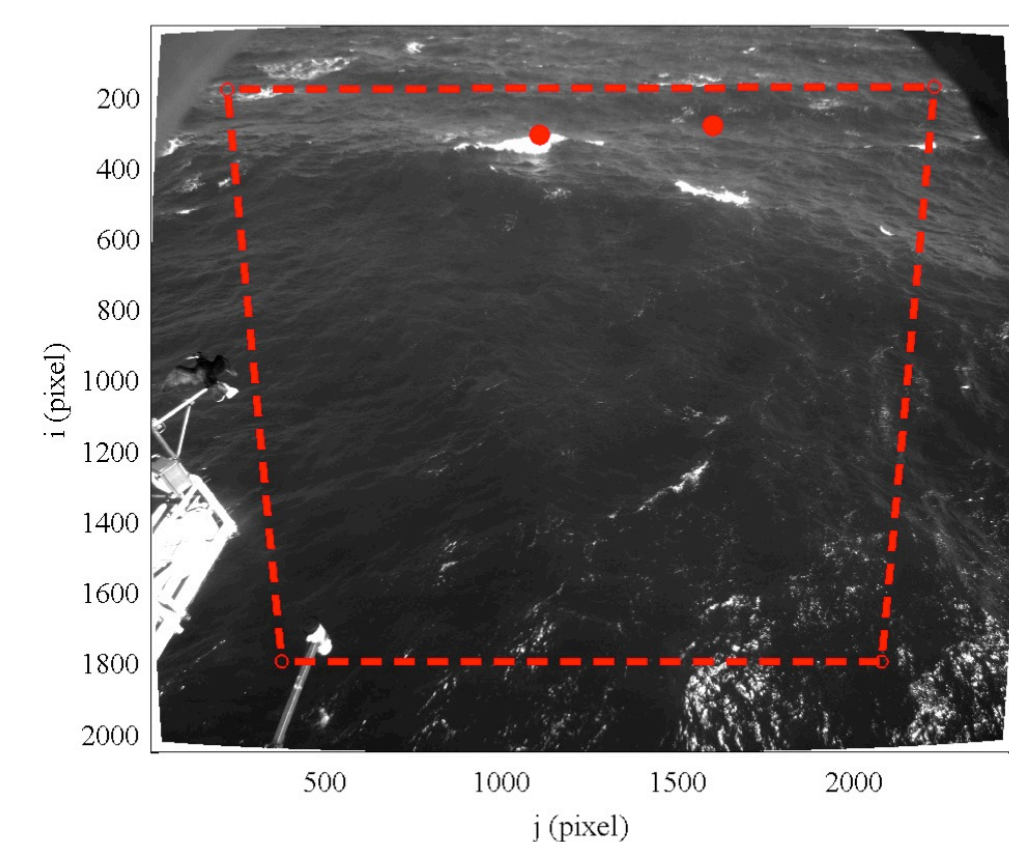
- Measurement of water temperature and salinity at different depths from the sea surface through the bottom
- Applications
  - River plumes detection
  - Dense water related processes (northern Adriatic Sea is site of formation of the so-called North Adriatic Dense Water, NAddW) → Exceptional event occurred during winter 2012
  - Long-term monitoring
- Instruments: Microcat SBE37



## BIOGEOCHEMICAL OBSERVATIONS



## STEREO WAVE IMAGING

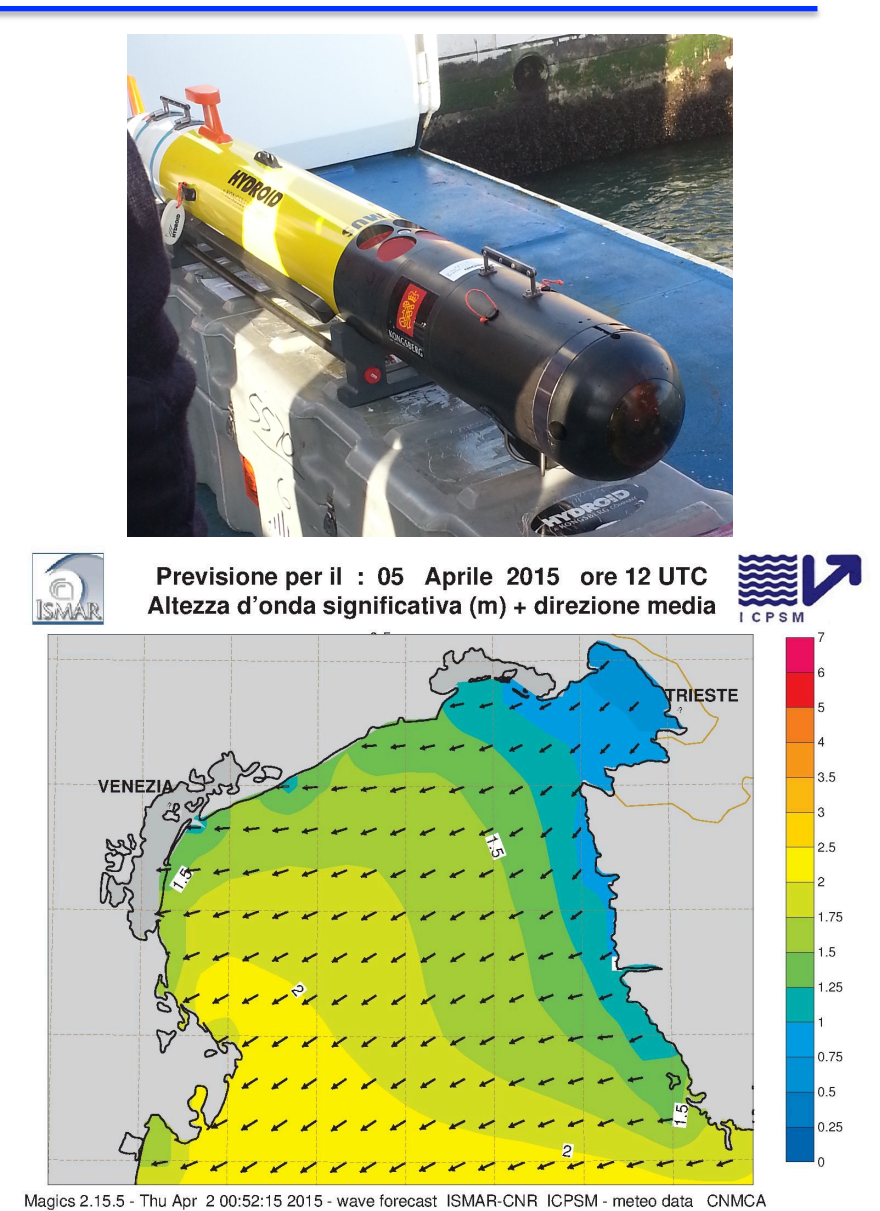
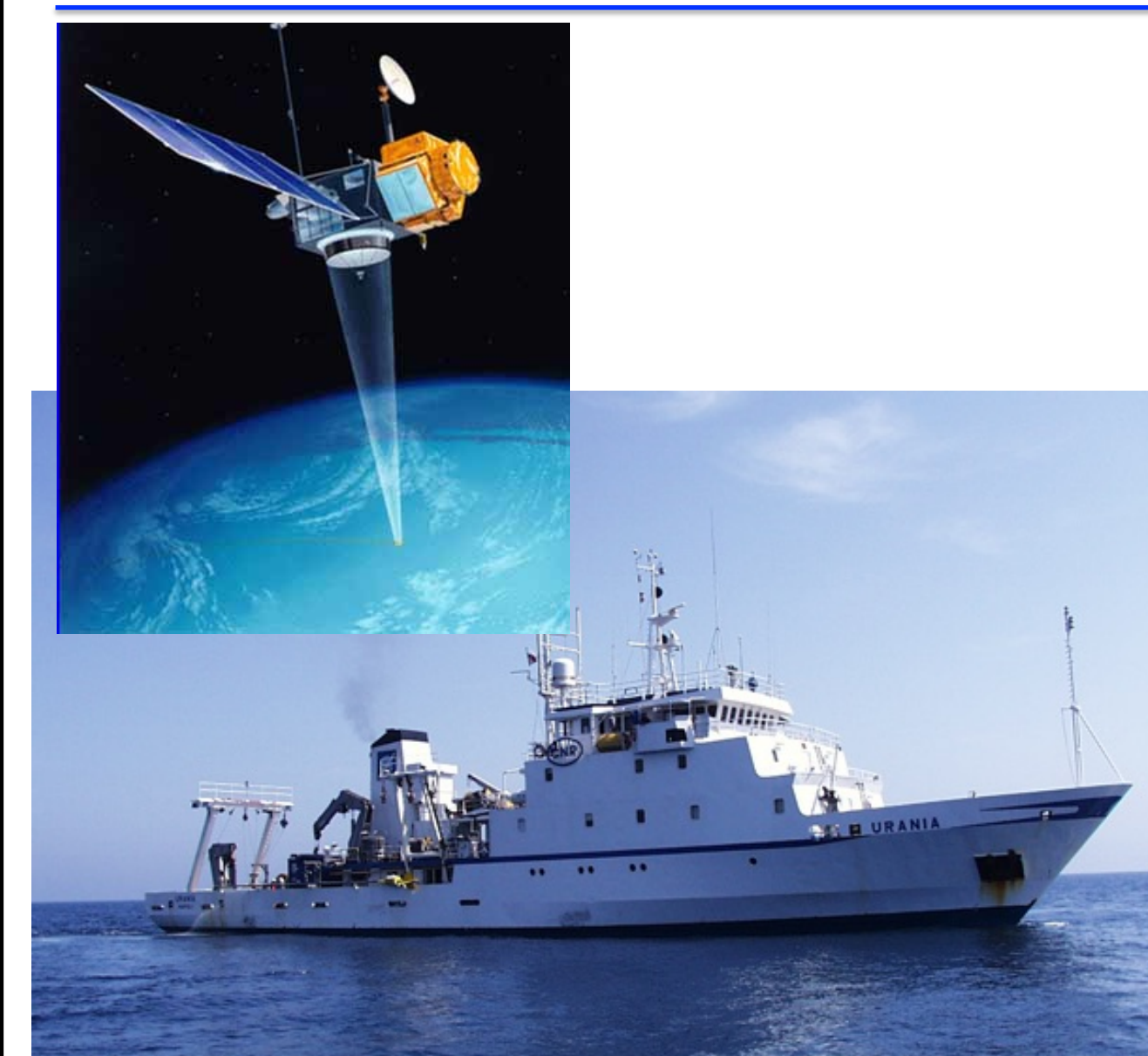


- Stereo cameras mounted on top of the platform
- Space-time monitoring of sea surface waves
- Applications: frequency-wavenumber spectrum; wave extremes; white-capping coverage; wave crest speed; air-sea interface momentum fluxes; ...

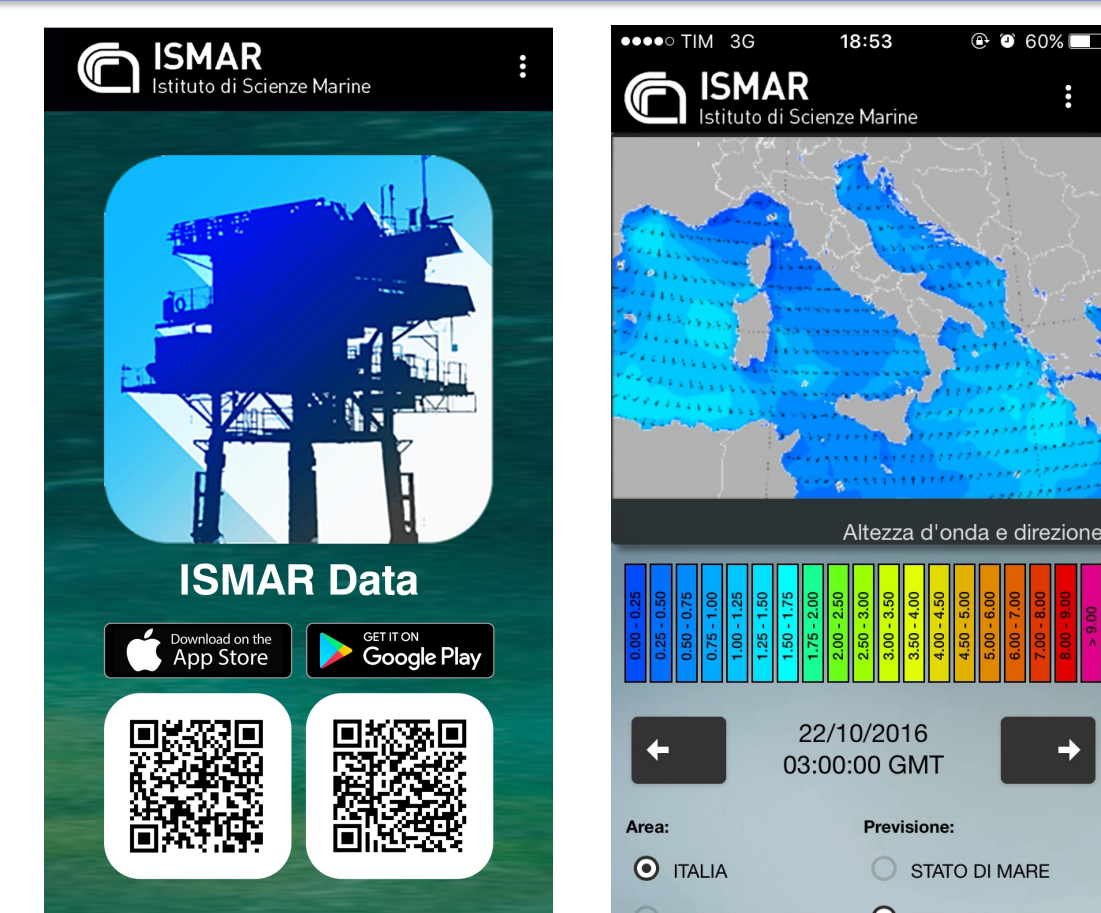
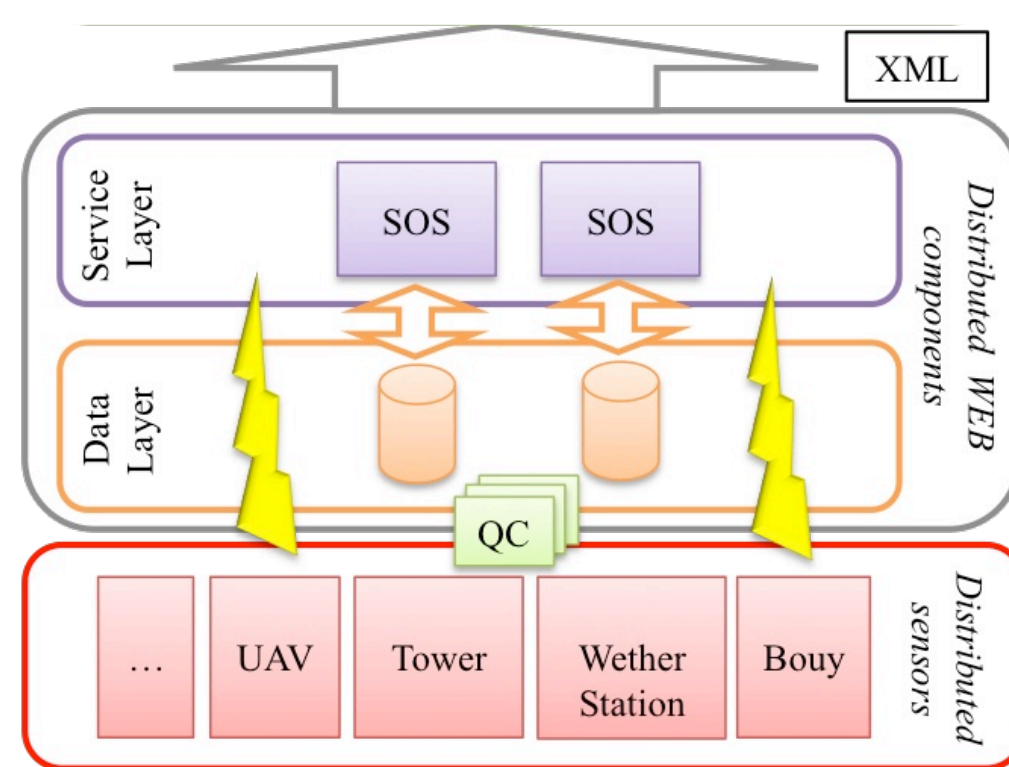


## APPLICATIONS

- Satellite-borne parameters in-situ calibration
- Operational and research numerical model assessment
- Calibration and inter-comparison of ship-borne instruments
- Testing of new technologies (LoRa connections, X-Band radar...) in a safe environment
- LTER (Long Term Ecological Research) network
- Aeronet AERosol RObotic NETwork NASA
- The platform is partner of JERICO (FP7 Project Towards a joint European research infrastructure network for coastal observatories, <http://www.jerico-fp7.eu/tna>).



## DATA SHARING and DEDICATED MOBILE APP



Three webcams included one underwater (-13 m)

