

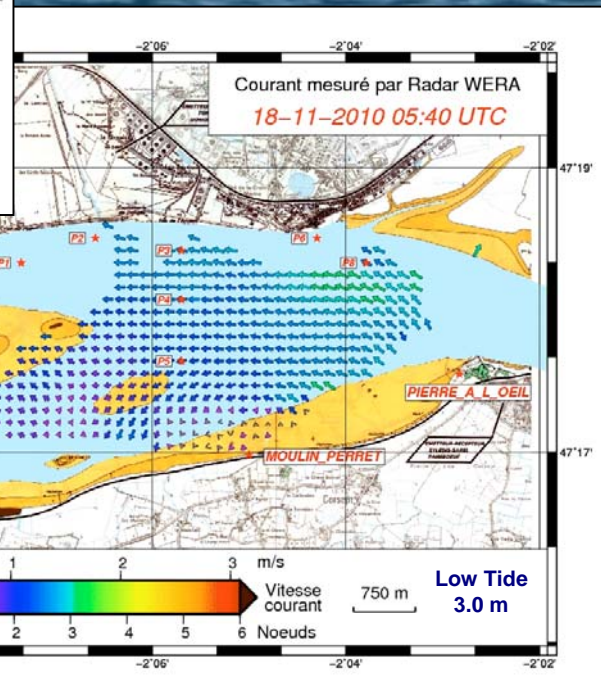
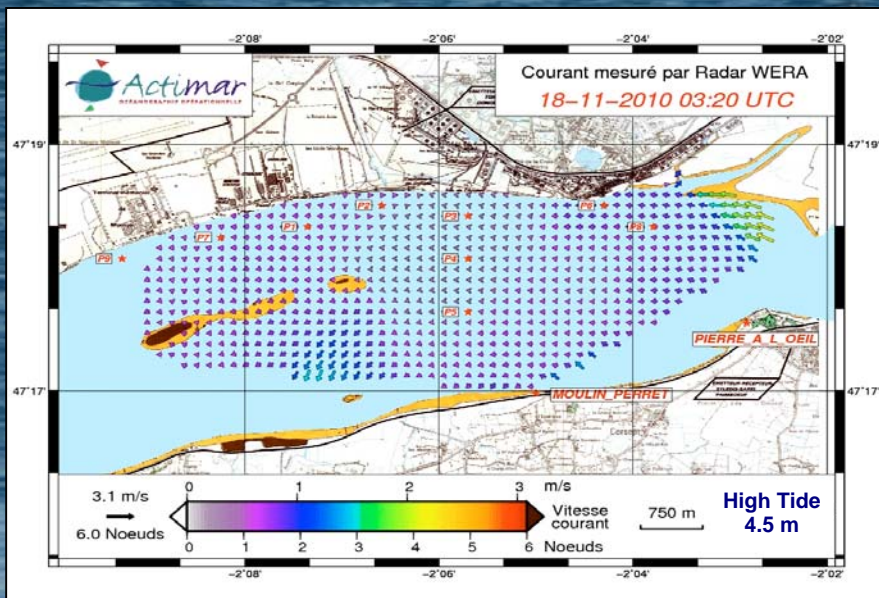
High Resolution Current & Wave Mapping WERA - VHF



WERA is modular and broadband.

Operation of WERA in the VHF band provides

- Very High Resolution (down to 100 m range cell size)
- High Ranges (up to 20 km)
- Very Compact Site Geometry (easy siting and installation requiring small areas)



Examples of current maps at high and low water using a 12 antenna, 43 MHz WERA system from the river Loire estuary, near Nantes, France

WERA systems allow the operation up to 50 MHz (VHF)

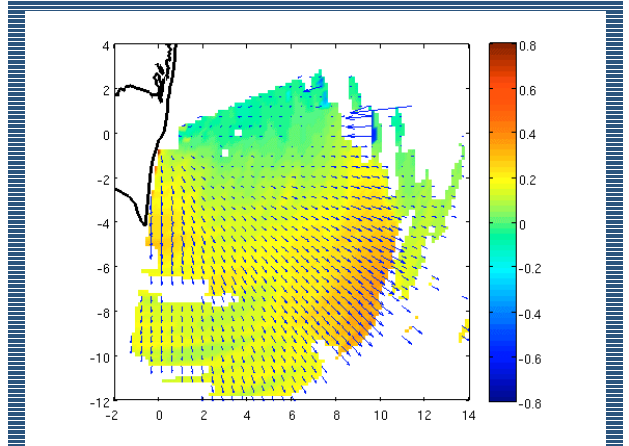
- **Any WERA system** can be **modified** to operate in the lower **VHF** band up to 50 MHz
- The very high operating frequency results in **short array**:
 - < 20 m for 8 antenna (beam forming mode)
 - < 3 m for 4 antenna (direction finding mode)
- It is easy to install and can be part of a rapid deployment **mobile** unit housed in a van or trailer
- A pair of stations is required to provide high quality 2-D vector maps. However, even a single station can provide **2-D current vectors** but with reduced spatial resolution
- For ranges of less than 10 km the even more compact **PortMap** system is available, operating in the VHF band from 50 to 200 MHz
- **Low costs** for the modification of an existing HF system to VHF

Typical Applications

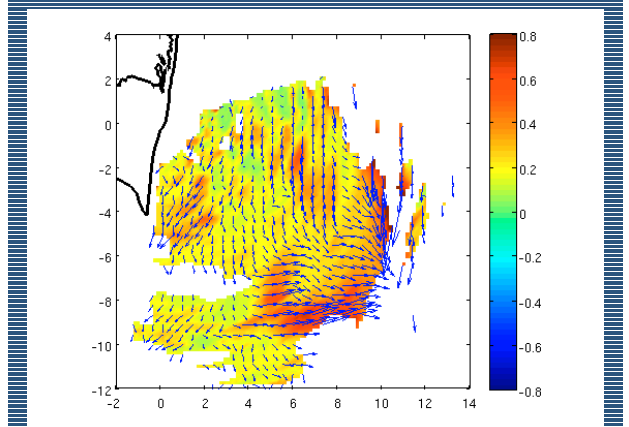
- **Ship Traffic Management** in Ports and Harbours
- **Coastal Engineering Applications:** land based high resolution current and wave measurements around headlands or artificial coastal features
- **Environmental Management & Protection:** real time monitoring of advection of pollutants, oil spills, larvae in coastal waters, enclosed basins or harbours



VHF receive array with 12 antennae near Nantes



Radial map of VHF-WERA at Cape Hatteras, USA



Vector map derived for radials of single station

Data courtesy of G. Voulgaris (University of South Carolina)