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SOCIB: the impact of new marine infrastructures in understanding and forecasting the coastal oceans: some examples from the Balearic Islands in the Mediterranean Sea

Tintoré Joaquín[1], Guillermo Vizoso, Benjamín Casas, Lionel Renault, Simón Ruiz, Emma Heslop, Ananda Pascual, Romain Escudier, Jerome Bouffard, Alejandro Orfila, JuanMa Sayol, Lluís Gómez-Pujol, Amaya Alvarez, Amy Diedrich, Pau Balaguer, Sandra Espejo, Sonia Gómara, Kristian Sebastian, Jeroni Brunet, Josep Llodrá, Sebastià Lora, Marc Torner, Simó Cusi, Miguel Martinez-Ledesma, Carlos Castilla, Enrique Vidal, Tomeu Cañelles, Sonia Ponce-de-León, Tomeu Garau.

[1] SOCIB (**B**alearic **I**slands **C**oastal **O**bserving and Forecasting **S**ystem), www.socib.eu and IMEDEA (CSIC-UIB). Parc Bit, Edifici Naorte. E-07121, Palma de Mallorca, Spain.
jtintore@socib.es

New monitoring technologies are being progressively implemented in coastal ocean observatories. As an example, gliders allow high resolution sampling, showing the existence of new features, such as submesoscale eddies with intense vertical motions that significantly affect upper ocean biogeochemical exchanges, an issue of worldwide relevance in a climate change context.
SOCIB, is one of such systems, a new facility of facilities (covering from the coast to the open sea, and including among others a nearshore beach monitoring facility, HF radar, gliders and AUV's, moorings, satellite, drifters and ARGO profilers, modelling), a scientific and technological infrastructure which is providing free, open, quality controlled and timely streams of oceanographic and coastal data and also modelling services. SOCIB takes profit of the strategic position of the Balearic Island at the Atlantic/Mediterranean transition area, one of the 'hot spots' of biodiversity in the world's oceans. As an example of on-going SOCIB operations, since January 2011 sustained glider operations are in place in the Ibiza and Mallorca channels. The data centre is the core of SOCIB. The data management system created for gliders is an example of the new informatics capabilities for real time definition of mission planning, including adaptive sampling and real time monitoring using a Web tool that allows quick visualization and download. This type of new infrastructures, combined with new technologies and careful scientific analysis will allow new ways of international cooperation leading to major science breakthroughs in the very near future and new ways of science based coastal and ocean management.