

## Press release

FOR IMMEDIATE RELEASE 17th February 2011

### **Gliders successfully used for the first time during an anti-submarine warfare exercise, Proud Manta 11**

*Test conducted by NURC, a NATO Research Centre in La Spezia*

**From 24 January to 11 February**, in the Ionian Sea to the southeast of Sicily, **three gliders** participated for the first time in an anti-submarine warfare (ASW) exercise. During **Proud Manta 11**, **NURC**--a NATO Research Centre in La Spezia--successfully used the gliders to collect *in situ*, three-dimensional environmental data to support improved operational planning and decision-making tools. As opposed to traditional propelled autonomous underwater vehicles (AUV), gliders use shifts in mass to steer and changes in buoyancy to dive and surface, and can stay at-sea for very long periods of time.

Thanks to the Italian Navy, **two shallow-water gliders** (called by scientists **Greta** and **Zoe**) and **one deep glider** (named **Noa**) were deployed from the Italian Navy vessel *Levanzo*. For 18 days the gliders operated autonomously, sending data every three hours through an Iridium satellite link back to a **command and control room at NURC**.

The **three gliders** offered a complete and real-time synthesis of oceanographic data of the Proud Manta exercise area, which helped participants **mitigate the impact of environmental uncertainties on operations**. "We have developed sophisticated models and software to ensure effective glider mission planning and safe operations management during the exercise - according to **Michel Rixen**, NURC's Proud Manta 11 scientist-in-charge - Glider data have been exploited continuously in ocean prediction systems and anti-submarine warfare tactical decision aids **to support and optimize operational planning and asset management**". For example, temperature, salinity, and optical data help understanding environmental conditions that impact the operational effectiveness of submarines.

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