



## **Role of Po River waters in the intense winter convection episode in the South Adriatic Pit**

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A very intense convection episode in the cyclonic South Adriatic Gyre was documented during the winter 18 February 2012 cruise, after an episode of extreme heat loss. The presence of chlorophyll a in addition to Cyanobacteria and chloroplast related pyrotags was detected down to 600 m. Current paths as given by chlorophyll a satellite images on February 25 and drop in salinity (approximately 0.02 in the 0-100 m layer with respect to the previous January cruise) indicated that low salinity and nutrient rich Po River waters might have entered the gyre. That could had happened due to intensified circulatory motions around the Pit during or after the convection event. The inflow of these waters could have favored the very large productivity following the event, later in March. In addition the inflow of low salinity waters from the Po River could have changed dynamic depths of water columns and the rotation intensity around the Pit. The circulation in the area is now being investigated both by ROMS model simulations and by computation of geostrophic currents to verify this new hypothesis.