

First two years of results from a mooring over a *Posidonia Oceanica* seagrass meadow (Corsica, France)

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We report the first two year of results from a 10m deep mooring over a *Posidonia Oceanica* seagrass meadow (Corsica, France) where we deployed from August 2006 to August 2008 an array of 3 optodes, a fluorometer and a sensor for measurements of the partial pressure of CO₂ (pCO₂). The oxygen data are used to compute by mass balance ecosystem metabolic performance rates (gross primary production, community respiration, net community production). The comparison with rates derived from discrete benthic incubations (every 2 months) is very satisfactory. The pCO₂ data are used to assess the sink or source of atmospheric CO₂ of the *Posidonia Oceanica* seagrass meadow. An application of such a mooring is to detect changes in the productivity of the *Posidonia* meadow that can be used as indicators of overall ecosystem “health” or degradation by human activities. Such a mooring can be used as an affordable and simple tool for management and sustainable development of coastal areas in the Mediterranean.

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