

Meta Data Report	
PI:	Rik Wanninkhof
Person(s) filing report (if different than PI):	Bob Castle
Operation description:	Discrete analysis of pCO ₂ on CTD casts.
Sampling times and locations:	Samples were drawn on all CTD casts. At least 80% of unique depths were sampled at each station. At least one pair of duplicates from the same Niskin bottle was drawn at each station. See CTD cast log sheets for further details.
Overall sampling strategy:	While the MapCO ₂ buoy was deployed, samples were always drawn from depths corresponding to the depths of the SAMI sensors on the
Expected initial data products:	Preliminary fCO ₂ at 20 C.
Expected distributed data products, and time-frame for distribution:	Final fCO ₂ at 20 C and in situ ~ 3 months after CTD data is finalized
Analytical method	Infrared absorption of wet headspace gas using a Licor 6262. Samples were analyzed in a water bath at 20 degrees C (+/- 0.02 C). Approximately 50 ml of sample was displaced with a standard gas close to the expected concentration of the sample and the resulting headspace was circulated in a closed loop through the sample cell of the Licor until the running mean of 20 consecutive readings differed by less than 0.1 ppm. Samples were run in pairs.
Data processing details	The ppm response of the samples was fit to a second degree polynomial using the 3 closest standard gases. Corrections were made for water vapor concentration, barometric pressure, and changes in the mass balance of the carbonate system caused by the equilibration. Standard gas concentrations were 205.07, 378.71, 593.64, 792.51, 1036.95, and 1533.7 ppm. They were purchased from Scott-Marine and referenced against standards from C.D. Keeling
Operation Log	
	No events of note - the system performed well.