

Equatorial Pacific Process Study



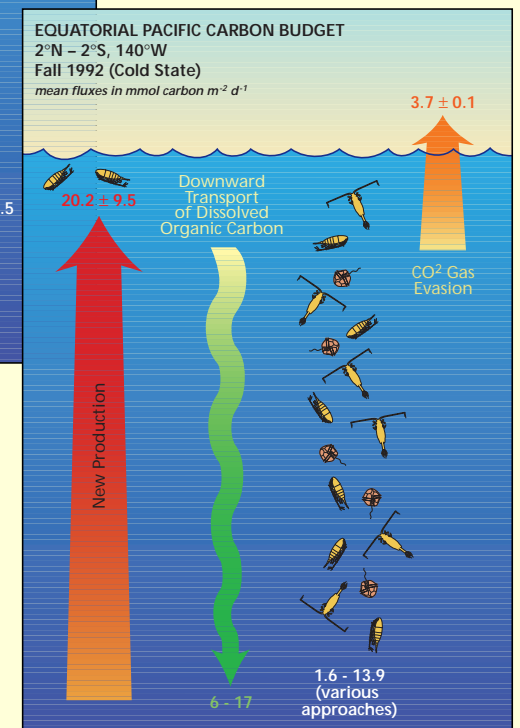
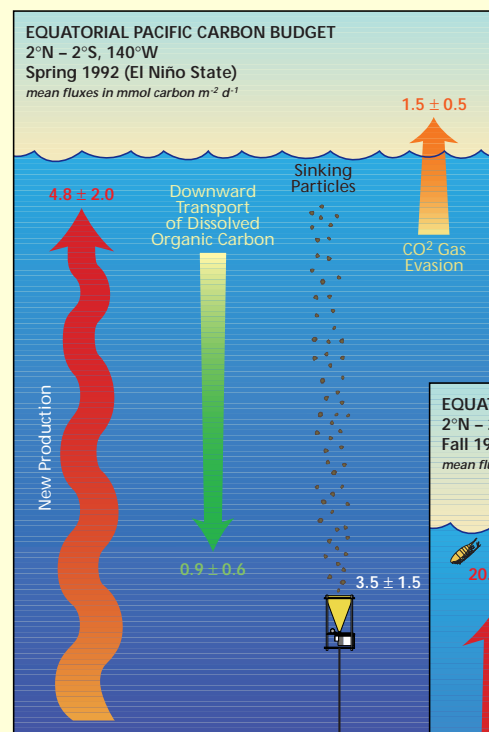
Understanding the System: Carbon Budgets. Trying to obtain balanced carbon budgets is another test of our understanding. In this exercise, we try to account for the fate of new primary production by estimating all the “sinks” or losses of the newly-produced carbon from the system. Due to uncertainties and imprecision of the measurements, budgeting is difficult and sometimes not possible.



Top: Retrieving sediment traps in the Equatorial Pacific.

Middle: R/V Thomas G. Thompson, used in both U.S. JGOFS Equatorial Pacific Process Study and Arabian Sea Expedition.

Bottom: Margaret Leinen and Jim Murray, coordinators of the U.S. JGOFS Equatorial Pacific Study



Carbon budgets for the EQPAC region in the spring (El Niño conditions) and fall (“normal” or cold state) of 1992 are shown here. In the spring, measurements allowed construction of a balanced budget. In the fall, balance was harder to achieve. In the Equatorial Pacific particle sedimentation is the dominant loss factor. In some regions (such as the BATS site in the Sargasso Sea), DOC and POC export are nearly balanced.