Parameters – Census data of coccolith species encountered in the Gulf of Mexico water.

Coccoliths are calcareous plates secreted by photosynthetic protists known as calcareous nannoplankton.

Counts are shown in cell density meaning coccolithophore cells per liter.

**Sampling and Analytical Method**

a. Shipboard Sampling: Water samples were taken through the photic zone via CTD Niskin-bottle rossettes that also provide water-chemistry data. About 1-2 liters of the water are filtered aboard ship using a vacuum pump using 0.8 µm nucleopore filters. The filters are then oven-dried and stored for coating onshore.

b. Sample Preparation: The dried samples are mounted on aluminum stubs and sputter-coated with gold-palladium for study in a scanning electron microscope (SEM).

c. Quantitative Counts and Data Analyses: Species cell counts in 200 SEM frames (approximately two complete transects) are made at 2500 X magnification at about 11 mm working distance; this provides estimations of the filter area examined.

d. Cell densities (cells per liter) were determined by counting the total number of cells per unit area and dividing it by the volume of water passing through that area.