RATE OF SEDIMENTATION IN THE COASTAL SYSTEMS AND ON THE SOUTHER CONTINENTAL PLATFORM OF THE STATE OF SÃO PAULO, BRAZIL.

1TESSLER, M.G. , 2 CUNHA, I.I.L., 1 SAITO, R.T., 1 FIGUEIRA, R.C.1Instituto Oceanográfico/USP, São Paulo, Brazil;2 IPEN, São Paulo, Brazil.

Analyses of the concentrations of the natural radionuclideos 210Pb and 226 Ra, scattered in the environment in vestigial amounts in witnesses of the coastal and occeanic areas provide a historical record of events and make it possible to estimate the background and variations in the volume of sediments laid down extensive periods of time. The results of the analyses of the rates of sedimentation obtained in the coastal systems (Cananeia-Igaupe system) and the souther continental platform of the state of São Paulo, by means of the calculation of the 210Pb and 226Ra by gama spectrometry, are presented in this study.A detector of hyperpure Germanium with a low level of bottom radiation and a study of the phototype of these radionuclideos was used for the analysis of these same radionuclideos in the marine sediments. The analysis of the 210Pb was undertaken by means of the gama emission of 47Kev and that of 226Ra by the gama emission of the Bi (609 Kev). Additionally a sedimentation rate was calculated for purposes of comparison on the basis of the levels of 137 Cs present in the witnesses, the biennium 1963/1964 being taken as the maximum pcak of atmospheric emission by nuclear explosions as from witch time on the atmospheric emission of this radionuclid diminishes and its rate of deposition on the earth's crust is considered constant. The rates of sedimentation obtained for the coastal system show agreement of the values obtained for 210Pb (5.33mm/yr) with those obtained through the dating method for 137Cs (5.46mm/yr). The sedimentation rates obtained for the continental platform correspond to values some five times inferior to those obtained in the coastal systems.