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Model of spatial distribution of ^{40}K and ^{137}Cs in marine sediments of the southeastern Brazilian upper margin

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There is a lack of knowledge regarding the distribution of radionuclides in superficial marine sediments of the southeastern Brazilian upper margin. Through the means of high-resolution gamma ray spectrometry, ^{40}K and ^{137}Cs radioactivities were quantified in over 90 sediment samples between 50 and 1,000 m isobaths for the construction of a model of spatial distribution in marine sediments. The activities obtained are 49.28 – 589.10 Bq kg⁻¹ for ^{40}K and 0.27 – 3.31 Bq kg⁻¹ for ^{137}Cs . Also, it was seen that this radionuclides distributions have a latitudinal differentiation, probably due to the different physical and sedimentary processes dominant in each sector of the study area.