

Fluctuation in biological pump and the vertical transport of inorganic elements at the Shatsky Rise during the last 180kyr

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The fluctuation of inorganic elements associated with biological pump in Quaternary has not been studied. Therefore, biogenic components and inorganic elements sedimentation were analyzed using sediment core collected in Shatsky Rise in order to verify the fluctuation of biogenic sedimentation and the related vertical transport of inorganic elements. Eleven inorganic elements were classified into three groups based on correlation with biogenic components: lithogenics group, organic group, and carbonate group. It shows that material cycles of inorganic elements are affected by fluctuation of biogenic sedimentation, responding to global climatic change during the late Pleistocene.