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Swell freak wave manifestation on the background weak wind wave field

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Interference of unidirectional swell and wind waves in deep water in frameworks of linear potential theory is considered. Wind waves are described by Pierson – Moskowitz spectrum, and swell – by the frequency-modulated wave packet. It is noticed that in case of a variable wind in a storm area the swell waves can be focused on some distance from the origin area, forming abnormal big waves ("freak waves"). A visibility of the freak wave swell of different shapes in wind wave field is examined. The swell and wind waves are good selected in spatial-temporal diagrams due to difference in the speeds of propagation. The life-time of freak waves is estimated.