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Surface conditions east of the Reykjanes Ridge (North Atlantic) during the Holocene cold events: evidence from planktonic foraminifera

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Marine sediment core AI-3359 (59°29.885' N, 24°42.105' W, 2517 mbsl, 4.86 mbsf) was recovered using a gravity corer during the scientific cruise of the R/V "Akademik Ioffe" in 2015 east of the Reykjanes Ridge. Studied core section was formed in the area of sediment waves between Björn and Gardar Drifts. The age control is based on 15 AMS 14C dates. Studied core spans about 44336 years. The average sedimentation rate of the upper part of the core section (0–341 cm; Holocene) is about 29 cm/ka. The maximal sedimentation rate is observed between 9992 and 10838 years BP (58.3 cm/ka). In the lower part of the core section (341–486 cm), the average sedimentation rate is 4.75 cm/ka.

Planktonic foraminifera and derived from them sea-surface temperatures (SST), as well as stable isotope data and ice-rafted debris were used to trace the main changes in the surface conditions east of the Reykjanes Ridge during the Holocene cold events. Migrations of Subarctic Front during the Holocene were reconstructed. It was shown that not all registered cold event correspond to Bond events.

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