Reconstruction of bottom water ventilation and export production based on benthic foraminiferal assemblages from the Shirshov Ridge (Bering Sea) during MS1-2

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The 18m-long core SO201-2-85KL (57°30.30 N, 170°24.79 E, w.d. 968 m) was retrieved from the Shirshov Ridge, western Bering Sea. Benthic foraminiferal assemblages have been studied in the size fractions 63-100 μm and >100 μm through the upper 3 m of the core that recovered MIS 1-2 according to the oxygen isotope stratigraphy and AMS- ^{14}C dates. Three foraminiferal assemblages are distinguished based on the faunal portions (%) and abundance (tests/g of dry sediment) of the relevant species. The oldest assemblage corresponding to the early MIS 2 consists of several common species including *Islandiella norcrossi, Trifarina angulosa, Uvigerina peregrina, Alabaminella weddellensis* and *Cassidulina reniforme*. It indicates relatively high seasonal bioproductivity and moderate bottom water hydrodynamics. The latter seems to increase prior to the LGM as follows from the very high percent of *T. angulosa.* The next assemblage characterizes low-productivity conditions of the LGM with decreased benthic and planktic foraminiferal abundance. Benthic and planktic assemblages are dominated by *I. norcrossi, A. weddellensis* and *Neogloboquadrina pachyderma* sin respectively. This fauna points to cold conditions with rather low productivity related to the seasonal phytoplankton bloom with a pulsed phytodetritus flux. Low values of *T. angulosa* and a lack of epifaunal species ascertain weak bottom currents and restricted ventilation. The youngest assemblage contains much more abundant fauna compared to two older ones. Along with the numerous *I. norcrossi* and *A. weddellensis* it consists of noticeable amount of *T. angulosa, U. peregrina, Elphidium batialis* and *Epistominella exigua*. Very high abundance of planktic and benthic foraminifera, enhanced faunal portion of phytodetritus feeding *A. weddellensis* and *E. exigua*, productivity-related *U. peregrina, E. batialis* and planktic species *Globigerina bulloides* collectively suggest a considerable increase in bioproductivity over the termination, most likely at the Bølling-Allerød warming. The Holocene interval of the core contains much more siliceous microfossils while planktic and benthic foraminifera are remarkably less abundant.