

Variability of the near bottom hydrography, currents and mixing processes in the Logatchev-Field

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The aim of the priority program (SPP) is to carry out a multi-disciplinary, multisegment scale study of the mid-ocean spreading system in the Atlantic. The proposed project focuses on the magnitude and variance of the near bottom hydrographic conditions and currents in the Logatchev Vent Field. Advection of water mass properties and a range of hydrographic parameters will be observed by a moored profiler (Fig. 1) deployed over a one year period. This instrument is perfectly suited to resolve time scales from sub-tidal to annual periods and vertical structures from one to several hundreds of metres.

The moored profiler measurements will be supplemented by short term acoustic current profiling for turbulence in the near bottom layer, by conventional current meter moorings, and by CTD/LADCP operations during deployment and recovery cruises. The oceanic processes (advection, internal waves, turbulent mixing and entrainment) will be related to the dispersal of biogeochemical parameters and thus significantly contribute to the overall objectives of SPP1144.