Upper ocean parameterization based on the similarity theory

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Several schemes of turbulent mixing in upper ocean layer, including the modified scheme, based on the modified Monin-Obukhov similarity theory, are considered. Schemes have been used for calculation of upper layer evolution. The results are compared with data of automatic byous. It is shown, that scheme based on similarity theory gives the result at least not worse that those obtained with other schemes. Moreover, the scheme has some advantages, which makes it quite acceptable for including in ocean circulation models and climate models. Furthermore this scheme's been modified for including in 3-d ocean circulation model. Experiments have been made by the Baltic Sea model which used above mentioned scheme and scheme based on kinetic turbulent energy equation. It's shown that there were improvements of simulation of temperature and salinity vertical distribution.