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Features of behavior of small gaseous components above water surface of the Lake Baikal

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For research of small gaseous components deposition processes in Baikal atmosphere synchronous measurements of concentration ozone, nitrogen oxides and carbonic gas at heights of 0.5 and 3 m above water surface are lead. Diurnal variations of small gaseous components concentration of atmosphere are revealed. It is revealed, that high concentrations of ozone are observed in the afternoon, both at height of 0.5 and 3 m, minimum of concentration at 6 hour is observed. Diurnal variation of nitrogen dioxide concentration has maximum in the afternoon and minimum at night. Also measurements of meteorological parameters and turbulent characteristics were spent. Relation between a vertical heat flux, turbulence coefficient and gases concentration is found out. Also results of vessel routing measurements of ozone and nitrogen oxides concentrations on all water area of the lake and synchronous stationary measurements of aerosol and gaseous impurities at southwest and southeast coasts are presented. High spatial inhomogeneity of ozone and nitrogen oxides concentrations above water area is revealed. It is observed that concentration of given gases in atmosphere of southern Baikal higher than in middle and northern parts. At the north-west transport of air masses in southern part of the lake Baikal increasing nitrogen dioxide and aerosol components concentration was observed.