Geophysical Research Abstracts,
Vol. 10, EGU2008-A-00863, 2008
SRef-ID: 1607-7962/gra/EGU2008-A-00863
EGU General Assembly 2008

Parametrization of volume scattering function of coastal waters based on the measurements of the Black sea.

A. Sokolov (1), G. Khomenko (1), M. Chami (2)

1. Universite du Littoral Côte d'Opale, ELICO
2. Laboratoire Océanographie de Villefranche

A new parameterization of the volume scattering function proposed which is valid for coastal zone of the black sea. This parameterization is based on the data acquired in the measurement campaign in the Black sea in the 2002. More than 400 costal water samples from different depth were analyzed with VSF-meter developed by Marine Hydrophysical Institute (Ukraine) and SATLANTIC (Canada). The VSF was measured at high angular resolution of 0.3˚ at several wavelengths from 443 to 620 nm.

The measurements was filtered and averaged, it appears that the variance is about 25%. In some numerical models (for example HYDROLIGHT) the VSF is calculated as a function of the chlorophyll concentration. To simulate the VSF more precisely we exploit the additional measured optical data. In the coastal area (case 2 waters according to Morel) the sedimental particles dominates and we find that VSF – absorption correlation is more significant than VSF – chlorophyll concentration correlation. The involvement of the particulate absorption at the 350-750 spectral domain allows half the error variance.