

Mass convergence and wind fields in the marine surface layer  
of the Yellow Sea

최 효 · 이 영 국\*  
강릉대학교 대기과학과, \*한국해양연구소

During the passage of typhoons the mass convergence and divergence of air and water were investigated in the yellow sea. The temporal and spatial variations of geostrophic vorticity should be associated with the mass convergence or divergence in the surface boundary, which was induced by the horizontal gradient of pressure tendency with the inertial motion in the study area. The maximum value of positive vorticity was shown near the isallobaric low but, on the other hand, the maximum ones of negative vorticity were the vicinity of isallobaric high, that is, the front and lee side of the low pressure. The flow patterns between positive and negative vorticity fields were south-easterly and the patterns near the China and the Korea coastal regions were northerly components, respectively.

In the study area the response of the sea states on the mass convergence, wind stress curl and vorticity activity was analyzed by using the observed wind fields and the circulation of the yellow sea was studied theoretically in detail.