

# **The Vistula river discharge front - surface observations**

OCEANOLOGIA, No. 37 (1)  
pp. 75-75, 1995  
PL ISSN 0078-3234

Plume front  
Surface water properties  
River Vistula

MACIEJ MATCIAK, JACEK NOWACKI  
Institute of Oceanography,  
Gdańsk University,  
Gdynia

Manuscript received December 8, 1994, in final form February 27, 1995

## **Abstract**

The spreading of Vistula river water has been studied on the basis of surface spatial distributions of water properties. The horizontal divergence field of the gradient of a given property is analysed to find the main directions of surface water transport. This shows that advection in the direction perpendicular to the frontal line is weak. Examples of salinity, temperature (AVHRR/SST), density and nutrient concentration fields in the area adjacent to the river mouth are discussed.

**The Vistula river  
discharge front -  
surface observations**

**The Vistula river  
discharge front -  
surface observations**

**The Vistula river  
discharge front -  
surface observations**

**The Vistula river  
discharge front -  
surface observations**

**The Vistula river  
discharge front -  
surface observations**

**The Vistula river  
discharge front -  
surface observations**