



## **Monitoring and forecasting of hazardous hydrometeorological phenomena on the basis of conjunctive use of remote sensing data and the results of numerical modeling**

Nikolai Voronov and Alexandr Dikinis

Russian State hydrometeorological university, Department of ecological safety, Russian Federation (7777777@mail.ru)

Modern technologies of remote sensing (RS) open wide opportunities for monitoring and increasing the accuracy and forecast-time interval of forecasts of hazardous hydrometeorological phenomena. The RS data do not supersede ground-based observations, but they allow to solve new problems in the area of hydrological and meteorological monitoring and forecasting. In particular, the data of satellite, aviation or radar observations may be used for increasing of special-temporal discreteness of hydrometeorological observations. Besides, what seems very promising is conjunctive use of the data of remote sensing, ground-based observations and the “output” of hydrodynamical weather models, which allows to increase significantly the accuracy and forecast-time interval of forecasts of hazardous hydrometeorological phenomena.

Modern technologies of monitoring and forecasting of hazardous of hazardous hydrometeorological phenomena on the basis of conjunctive use of the data of satellite, aviation and ground-based observations, as well as the output data of hydrodynamical weather models are considered.

It is noted that an important and promising method of monitoring is bioindication – surveillance over response of the biota to external influence and behavior of animals that are able to be presentient of convulsions of nature.

Implement of the described approaches allows to reduce significantly both the damage caused by certain hazardous hydrological and meteorological phenomena and the general level of hydrometeorological vulnerability of certain different-purpose objects and the RF economy as a whole.