Taras Shevchenko National University of Kyiv

The Center “Physical and Chemical Material Science” of the National University of Kyiv and National Academy of Sciences of Ukraine

DISSIPATIVE STRUCTURES FORMATION UNDER ACTION EXTREMELY HIGH FREQUENCY ELECTROMAGNETIC FIELD ON WATER WITH DYE

Victor Martynyuk
Alena Nizhelska

www.mavis.science-center.net
e-mail: mavis@science-center.net
DISSIPATIVE STRUCTURES IN WATER
was revealed using heat-vision technology:


Method of EHF EMF influence on water with dye

EHF EMF intensity: $10^{-2}$ watts

Heating near a waveguide: $2^\circ - 4^\circ$C

Temperature difference between dyed and non-dyed volume space: $< 0.5^\circ$C
Conclusions:

1. Action of EHF EMS forms the dissipative structures in water that can be visualized by dyes. The temperature gradients is the main factor that initiate formation of dissipative structures.

2. The life-time of dissipative structured is above 10-20 min and more. They are destroyed because of diffusion.

3. Most credible form of the dissipative structures depend on nature of dye, size of volume (height and width) (may be also on geometry of volume).

4. The behavior of experimental system depends on uncontrolled environmental factors.
Дякую за увагу