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Building of short-termed earthquake prediction system in water areas.

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There are a lot of horizontal and vertical low-speeds seismic channels – waveguides. Role of those channels in «focus- focus cover – break point» system and in earthquake prediction is great. Presence of low-speed channels – waveguides, explains why above-far spreading of waves and other earthquake forerunners being observed.

To solve the tasks of forecast seismology – searching, detecting and monitoring forerunners of earthquake, volume models of focuses and focus zone were created. For focus search, and after it for earthquake forerunners complex geophysical researches and monitoring on different levels: space – air – earth/water area – well/sea bottom are used.

According to our research experience each sign there must be an understanding and justification three things – what we measure, how we measure and where we measure – provides valid research.

Earthquake focus has physical parameters from host rocks, and when it accumulates energy and when stress state occurs, its environment can emit electromagnetic, heat, seismic and other types of energy. It allows mapping of earthquake focuses by magnetic, gravitational, seismic, electric and electromagnetic fields (what we measure?), and by measuring them in specially selected places (where we measure?) and at certain time (when we measure?), and by complex data process – to consider the upcoming events.

In the ocean, earth's crust cracks and other objects of increased seismoacoustic, geochemical and electromagnetic activity, while producing (micro-, macro-) vortex dynamics in adjacent sea thickness, turns them in abnormally saturated with different inhomogeneties, including gas bubbles, water environment areas. This inhomogeneties have wedge shape, created by expanding vortexes, coming to the sea surface. This quasiwaveguide on the sea surface characterizes with weak temperature, saltiness, sedimentation potential, electromagnetic emission and other anomalies, and from atmosphere observer perspective it appears as «trail» on the water and in the atmosphere, which can be detected with aerial photography, radiolocation, laser sensing, thermal imaging and other geophysical methods.

Monitoring of crack «trace», acoustic emission in the waters, bedrocks, including in the waveguides, in the air, internal waves in the ocean, ionospheric and atmospheric processes allows to detect abnormal forerunners in hours, days before, and warn about upcoming event.

