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About retrospective and perspective forecasts of earthquakes

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Here are considered, basically, operative (short-term) forecasts of earthquakes, i.e. forecasts of time, a place and intensity, with reliability sufficient for the organization of protective actions (evacuation of the population, cessations of production, preservation of the equipment etc.) which would provide, on the average, a considerably more profit from successes , as if losses of mistakes.

Serious works of the forecast of earthquakes do not promise easy achievements.

In contrast to these works there are empirical forecasts based on “the precursors”.

The authors surely confirm these forecasts by the already occurred earthquakes.Usually these "postcasts" contain several precursors , several retrospective confirmation and look convincingly. Actually these forecasts prove to be true very seldom and most likely are casual.

The purpose of this work - to show the reason of occurrence of numerous pseudo-forecasts and an opportunity of their ample occurrence in future. For lack of criticism, they are easy for designing, even at full absence of true precursors. It is known about 1000 phenomena, which were assumed by precursors. The mentioned above large number of precursors or tendentious use of the big catalogue of earthquakes make a basis for designing postcasts.

It is shown, that it is possible to design postcasts even if all precursors are false, i.e. are not connected with earthquakes absolutely.They look as usual postcasts in spite of the fact that are designed from "precursors" a priori not connected with earthquakes completely.

For example, selecting from 1000 known precursors those,which coincide for several earthquakes, it is possible to design hundreds postcast. On the other hand, it is possible to select 1000 postcasts from the catalogue in 10000 earthquakes ($\sim$ the annual catalogue for M>=4). Each of them will contain 7 - 10 "precursors" also it will be confirmed on the average by ten earthquakes.

Standard procedures of mathematical statistics are given to eliminate, with the set of significance level, pseudo-forecasts and find confidential estimations for predicted probabilities of expected earthquakes .

The realistic operative forecast of earthquakes, maybe, becomes possible at essential achievements of the theory and practice. Now (most likely in the future) hopes of it are doubtful enough. More perspective is protection against earthquake. Besides constructing earthquake-proof buildings, the major problem is to find effective ways to protect already existing not earthquake-proof buildings.