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Prediction of latitude and longitude of earthquakes at global level using the regressive objective regression method

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Objective: To model the series of data of a set of earthquakes at a global level included in the period from 2014-08-27 23.22.23 UTC until 2014-08-27 04.47.36 UTC, there were 50 earthquakes taken globally and it was determined a model to predict the longitude and latitude of these events. Methods: The Regression Objective Methodology, ROR, is used. Two models are calculated, the first for latitude and the second for longitude, the models are determined in a short term. Results: The correlation coefficients are obtained between the real value and the forecast of 0.716 for model 1 with an error of 25.09 significant degrees at 99% and, for model 2, R = 0.637 with an error of 74.64 degrees significant at 90%. Earthquakes for latitude depends on the value 1.16.12 earthquake behind, the parameter returned 16 steps back are significant at 99%. For this model the trend is 0.118 not significant, model 2 depends on 1, 2, 11, 21 steps back, earthquakes 1 step back is significant at 90%, the trend of the series for model 2 is a rise in length by 4,637 significant at 95%. Discussion: Our work shows the longitude and latitude of earthquakes occurrence are perfectly predictable parameters similar to the variable wind, so a careful attention must be paid to the prevention planes of these phenomena to reduce vulnerability in cities. Conclusions: It is concluded that model 1 is the least error while trend in model 2 has a significant increasing. Global earthquakes are regressive events at planet level and what happens in one place has repercussions in another, not randomly or due to chance, but rather a well-determined phenomenon.

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