Long Range Earthquake Forecast 122 Day Skill Review – August to November 2016

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Abstract:

This paper documents the skill of the Quakescanner Superfluid Quantum Gravity Distortion method for the long range prediction of significant earthquakes for the period August 1st 2016 to November 30th 2016 , a period of 122 days. The findings presented demonstrate that the model was exceptionally skilful in predicting 18 out of 36 days in which significant earthquakes occurred. The assertion of the findings is that the odds of randomly correctly choosing 18 out of 36 days in a 122 day period using only 44 attempts are approx 34.7:1 against. Furthermore the model predicted only 44 out 122 days to produce significant events (the number of tries), so far from being a simple 50/50 duck shoot, the results presented here, so far support the hypothesis that planetary positions and tidal anomalies are very likely causally related to terrestrial seismic activity in some way and that the QS model which employes a modified tidal equation to derive a vectorisation of theorised quantum gravity distortions which both pass through Earth's path and modify the density of the space-time fabric from which Earth instantaneously generates its own gravity has thus far proved a substantially accurate way to model this.

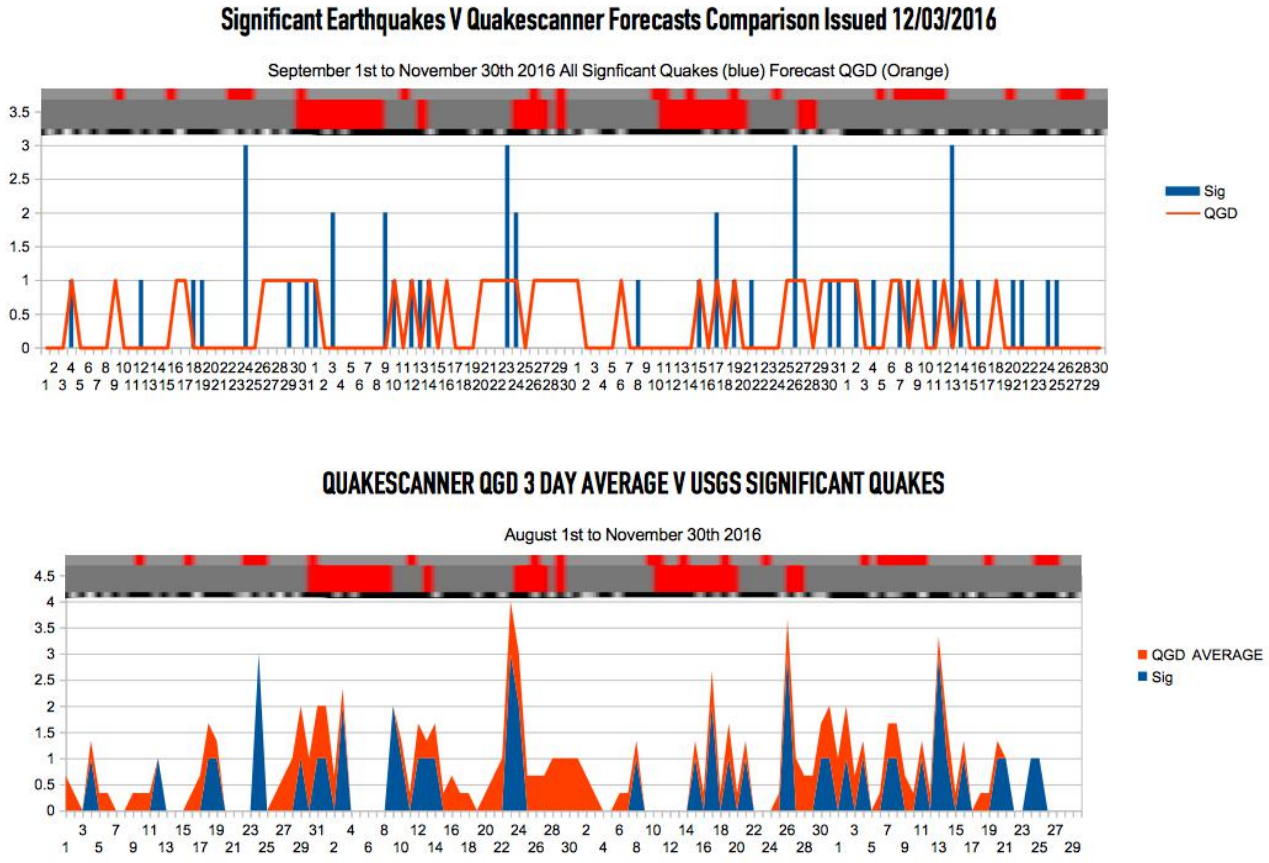
Overview

For those not acquainted with the project, the QS earthquake forecast project is a public demonstration and review of advanced earthquake forecasting derived from QS software interpreted by a human forecaster (the author). The author publicly publishes a month advanced forecast on the 1st of each month and the forecast is reviewed at the end of each month.

The forecasts skill is calculated and all results added to the running totals (currently a 4 month period).

The forecast has a single aim: To demonstrate that a modified newtonian model of gravitational tidal forces fed with J2000 orbital elements is capable of forecasting in advance, the likelihood of significant seismic events. The project does not seek to determine geographic location of events,simply that events are more or less likely in accordance with the model output and forecast based upon it.

See the full project on Research Gate for a complete overview of the project and the resources produced. Full project is readable here :
https://www.researchgate.net/project/Long-Range-Earthquake-Forecasting-Based-on-Quantum-Gravity-Distortion



For this review, Quakescanner forecasts dates specifically noted as "Significant" were graphed against USGS reported earthquakes of type "Significant" for the 122 day period August 1st to November 30th 2016.

In the period there were 36 days with significant events, Quakescanner forecast 44 Days to have significant events. This is an over run of 8 days in 122.

For the purpose of a binomial probability distribution, the chance of guessing which of any days would produce significant events is therefore 36/122 = 0.2951 or **29.51%**

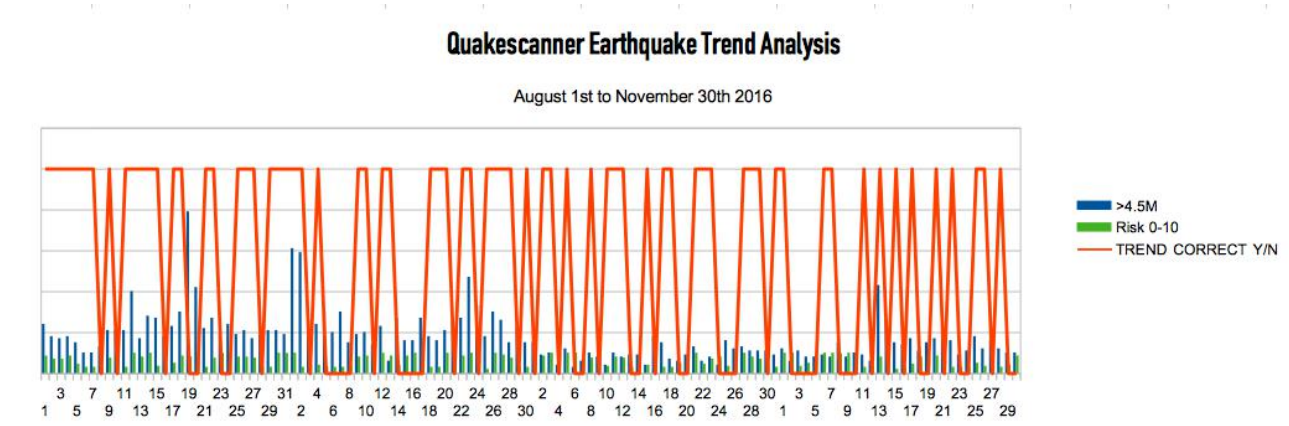
Significant Earthquake Days forecast exactly

Of the 36 days with significant events, Quakescanner exactly predicted 18 of them. The other 26 days forecast being either false alarms or correct within 24 hours or less, however the purpose of this review is accuracy on a daily basis so they are uniformly considered failure.

Given a daily probability of success of **29.51%** with a number of samples = **122 days** and a number of successes = **18**, the binomial probability of guessing 18 days out of 36 in a set of 122 possible choices in 44 attempts at random is **2.8%**

For consideration is the fact that the model exactly predicted 50% of the days with significant events, however because the possible number of actual positives was only 36 out of 122 the true odds of guessing by random such a high value is sufficiently low as to rule out "good luck" set at 60% or less by 4.3 orders of magnitude, I.e : if the threshold of a

random guess is 60% (meaning that 'often' a random set would produce similar level of accuracy) then a level of uncertainty of 2.8% has to fall by 57.2 to 60 to be as bad as pure luck. A shift from 2.8 to 60 therefore is an order of 4.3 magnitudes by standard base 10 log definition.

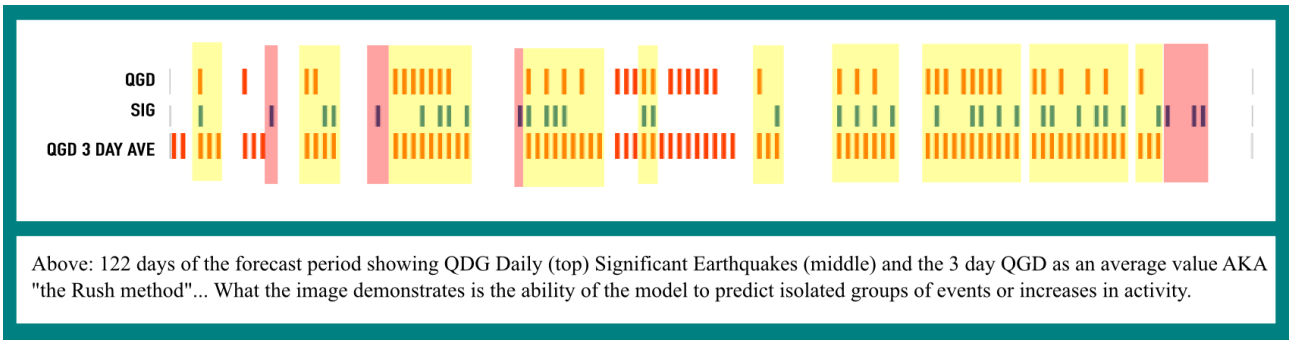


General Earthquake Activity Trend Analysis

Over 122 days the Quakescanner Risk % as displayed in the software correctly forecast a rise or fall in trend from one day to the next for 69 out of 122 days = **56.56%**

Using the binomial calculation in the previous section, the chance of guessing a single day correct with a Y/N choice is 50% (a simple coin toss)

Therefore the chance of randomly guessing 69 out of 122 days correctly is **2.21%**



Above: 122 days of the forecast period showing QDG Daily (top) Significant Earthquakes (middle) and the 3 day QGD as an average value AKA "the Rush method"... What the image demonstrates is the ability of the model to predict isolated groups of events or increases in activity.

The image above shows the 122 days of the forecast period and the groupings of significant earthquakes reported by USGS (blue) and both the daily forecast (top orange) and 3 day average forecast (bottom orange). Red regions denote utter failures in forecasting an event , and yellow regions show the models ability to determine the most likely period for significant events.

Conclusion

The results presented in this review strongly support the hypothesis that planets affect terrestrial and solar seismology in ways that cannot be ignored any more. Furthermore, that a model of superfluid quantum gravity as vectorised distortion fields outperformed random selection by 4 orders of magnitude.