Geophysical Research Abstracts, Vol. 7, 08585, 2005 SRef-ID: 1607-7962/gra/EGU05-A-08585 © European Geosciences Union 2005



Temporal and spatial variations of aftershock activity in the Gulf of Gökova, southwest Turkey

N. Ozer(1), Y.Altinok(1), H. Kurt(2), D. Kolcak(1)

(1) Istanbul University, Engineering Faculty, Department of Geophysics, 34320, Avcilar, Istanbul, Turkey (naside@istanbul.edu.tr fax:+(90) 212-4737180) (2) Istanbul Technical University, Department of Geophysics, 80626, Istanbul, Turkey.

The aftershock activity is characterized by p value, which is a rate constant of aftershock decay; and b value, which is a slope of an exponential distribution against magnitude. We explored the variation of the seismicity parameters b and p and their relation to see how the time and space changes for the recent earthquake sequences occurred in the Gökova basin, southwest Anatolia which is under a N-S regional extensional tectonic regime.

This sequences are 04.08.2004, Gulf of Gökova (Mw =5.5); 20.12.2004, Ula-Mugla (Mw =5.3) and 10.01.2005, Ören-Mugla (Mw =5.4) earthquakes. Data were obtained from the web page of Kandilli observatory (http://www.koeri.boun.edu.tr). The aftershock behaviours of this earthquakes were examined. The ranges of b and p values were eastimated to be about 1.05-1.41, 0.79-1.34 respectively. The correlation between b and p values must show significant constraint for the construction of the model to interpret aftershock activity. The deduced p and b values for the sequences show negative correlation which may explain factor of the early occuring aftershocks.