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An observed trend in the global seismicity across the equator

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A study of trend of global seismicity across the equator was carried out to see if any notable change in the earthquake occurrence existed from Northern latitudes to Southern latitudes as is the case with some geophysical phenomena. The region of study consisted of a strip of width 10^0 with the equator at the centre. The whole strip was divided into zones and sub-regions. A total of 7,178 earthquakes of magnitude 5.0 and above that occurred in this strip from 1970 - 2004 were used. We found that going from North to South, in all zones and sub-regions, global seismicity increased suddenly after crossing the equator. Lithospheric plate motions exhibit similar trends in the region of study. The cause of this global phenomenon, which may be responsible for asymmetric shapes of the African and American plates, is yet to be understood.