

THE GLOBAL DISTRIBUTION PATTERN OF THE OCEANS AND CONTINENTS WHEN LARGE-SCALE CONTINENTAL DRIFT CEASES

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The quandary of the mechanism of continental drift has been perplexing earth scientists for more than 80 years. Through the comprehensive studies of the overall rules of the routes and directions of drifting continents more reasonable mechanism besides the popular ones has been found. By observing the earth's overall movements from a random point within the solar system not too far away from the earth studies indicate that it is essentially the interaction of 2 factors of (1) the altitude difference between continents and ocean floors and the uneven distribution of oceans and continents and (2) the earth's rotation that caused the Pangea to split and afterwards continents to drift. Since with continental drift the Atlantic and Indian Oceans are being pulled to expand while the Pacific squeezed to shrink gradually, it would be more appropriate to re-denominate the circum-Pacific oceanic lithospheric subduction zone as the circum-Pacific continental lithospheric overlapping zone.

With the aid of oceanic lithospheric age map created from palaeomagnetic data since late Jurassic, quantitative analyses and calculations indicate that the directions and routes of continental drift are not arbitrary. The overall effect of the drift is to enable the earth's rotation to reach dynamic equilibrium in a shortest period of time which is called the least time principle by the author. Calculation shows that in no more than 83 Ma the minimum distance between the overall mass centre of continental crust and the rotating axis will be achieved, the large-scale continental drift will turn to cease and the widths of the Pacific, Atlantic and Indian Ocean basins at equator then will be 12,880km, 11,550km and 6,790km respectively.