



Earth meandering

H. Asadiyan (1) and A. Zamani (2)

(1) Geology Group, Payam-e Noor, Ahvaz, Islamic Republic Of Iran (asadiyan@pnu.ac.ir), (2) Shiraz- University, Earth Science Dept., Shiraz, Islamic Republic Of Iran

In this paper we try to put away current Global Tectonic Model to look the tectonic evolution of the earth from new point of view. Our new dynamic model is based on study of river meandering (RM) which infer new concept as Earth meandering(EM). In a universal gravitational field if we consider a clockwise spiral galaxy model rotate above Ninety East Ridge (geotectonic axis GA), this system with applying torsion field (likes geomagnetic field) in side direction from Rocky Mt. (west geotectonic pole WGP) to Tibetan plateau TP (east geotectonic pole EGP), it seems that pulled mass from WGP and pushed it in EGP due to it's rolling dynamics. According to this idea we see in topographic map that North America and Green land like a tongue pulled from Pacific mouth toward TP. Actually this system rolled or meander the earth over itself fractaly from small scale to big scale and what we see in the river meandering and Earth meandering are two faces of one coin. River transport water and sediments from high elevation to lower elevation and also in EM, mass transport from high altitude-Rocky Mt. to lower altitude Himalaya Mt. along 'S' shape geodetic line-optimum path which connect points from high altitude to lower altitude as kind of Euler Elastica(EE). These curves are responsible for mass spreading (source) and mass concentration (sink). In this regard, tiltiness of earth spin axis plays an important role, 'S' are part of sigmoidal shape which formed due to intersection of Earth rolling with the Earth glob and actual feature of transform fault and river meandering. Longitudinal profile in mature rivers as a part of 'S' curve also is a kind of EE. 'S' which bound the whole earth is named S-1(S order 1) and cube corresponding to this which represent Earth fracturing in global scale named C-1(cube order 1 or side vergence cube SVC), C-1 is a biggest cycle of spiral polygon, so it is not completely closed and it has separation about diameter of C-7. Inside SVC we introduce cone vergence cube (CVC or geotectonic equator GE) which rotate 45 degree counterclockwise with respect to SVC. Every cube from big scale to small scale fractalize in order of 2^3 and every '8' shape from big scale to small scale also fractalize in the same order. Three dimensional and fractoscopic imagination about understanding the changing on earth is very important so we should imagine '8' as curved surface, sea floor spreading happened in maximum curvature of these surfaces. '8' formed from pair 'S' string with opposite direction. '8' oscillate in Pole-Pole and Side-Side direction and have saddle geometry with two 'U' path along perpendicular saddle (e.g. Lut/Jazmurian and Helmand/Mashkal basin in Iran actually intersection of this saddle shape with the earth surface and Iceland /Black Sea and Cape Verde/Victoria Lake are also In/Out (small scale polygon) of 'U' shape conduit which followed axial saddle of Side-'S-2' and Okhotsk Sea /Balkhash Lake followed axial saddle conduit of Pole-'S-2' actually intersection of this perpendicular conduit with surface make spot-like-lakes/volcanoes or basin. Global EM in Side-S-1 bounded compression region-TP inside and tension region-East African Rift offside). This is a interesting competing between two kinematic geometry – spherical and isometrical geometry by using the interaction of them we can analyze the earth face in past, present and future apart of the forces that cause this face. C-1 in two dimensional look like six sided big tent which speared over Tibet and main rod driven along GA. Pair S-1 curve have seven component(fold) and six segment in between,S-7 exactly located on TP(center of S-1). Between two successive fold we have complex geology(e.g. eastern Iran and Afghanistan)mass dragged from North America and Siberian and accumulated gradually during six step in Earth Foundation(Tibet),S-7 bounded Takla Makan Desert (in smaller loop) and TP (in bigger loop) S-7 alter the earth balance and responsible for earth disturbing, another sample of 'S' curve we see around Australia and Kermadec/Tonga Trench, Aleutian ridge and Mackenzie Mt. and central Iran which are well obvious in topographic map, we find many samples converge in to this unified model.