A collision producing a change in the axis of rotation will bring about results of the same type and magnitude, with the modification necessarily related to the change in poles and equatorial planes. In Fig. 4 is shown a 5° shift of the bulge profile in the

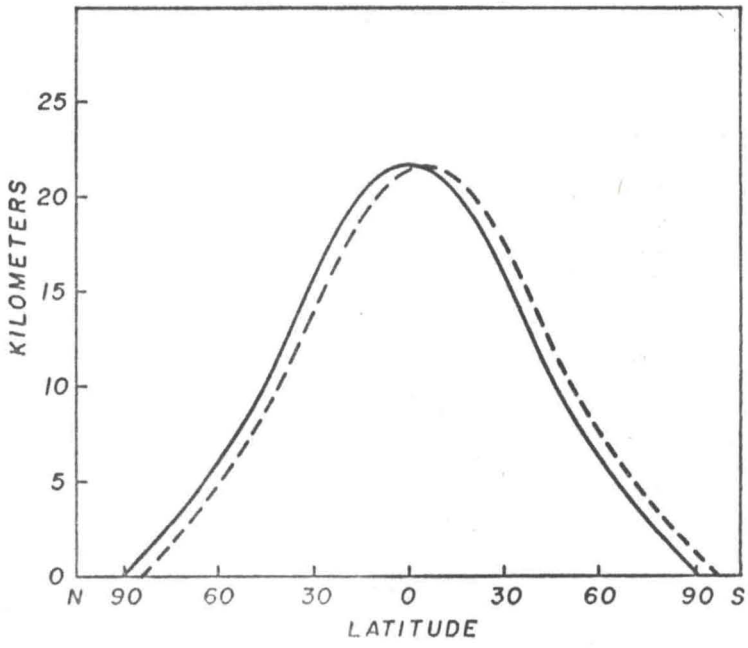


FIGURE 4.—Excess of radii over polar radii plotted as a function of latitude. The dashed curve is for a 5° displacement of a new axis of rotation.

plane containing the original and post-collision axes. The angular displacement of axis is taken as the arc whose tangent is the ratio of the moment of momentum of the spheroid to the angular momentum of the earth, as a first approximation. Pertinent values are shown in Table III and more discussion is to be found in reference 9. The point to be made is that the bulge contours are so displaced that in going about the great circle submergence-emergence-submergence and emergence of elements on the surface will take place. These effects taper off with a 90° change of longitude from the plane containing the two axes and will be at a minimum where the original and new equators intersect. The changes in elevation with reference to a newly stabilized hydrosphere provide a very important mechanism for the submergence and emergence of continental-sized areas simultaneously all over the earth. The reverse movement, due to the "relaxation" of the lithosphere to the new equilibrium figure, will then take place over