



Fig. 417.01 Precession of Two Sets of 60 Closest-Packed Spheres as Seven-Frequency Tetrahedron: Two identical sets of 60 spheres in closest packing precess in 90-degree action to form a seven-frequency, eight-ball-edged tetrahedron with a total of 120 spheres, of which exactly 100 spheres are on the surface of the tetrahedron and 20 are inside but have no geometrical space accommodation for an equiradius nuclear sphere. The 120-sphere, nonnucleated tetrahedron is the largest possible double-shelled tetrahedral aggregation of closest-packed spheres having no nuclear sphere.