1125-05-1042 **Luis Montejano*** (luismontej@gmail), Av. San Isidro No 303, Juriquilla, Queretaro., 76230 Queretaro, Mexico. *Rotors in triangles and tetrahedra.* Preliminary report.

Rotors in triangles and tetrahedra. Abstract We say that a convex body K in euclidean n-space is a rotor of a polytope P if for each regid movement R there exist a translation t so that P is circumscribed about $t(R(K))$.

It is well known that if K is a convex plane figure which is a rotor in the polygon P, then every support line of K intersects its boundary in exactly one point, and if K intersect each side of P at the points A_1,...A_n, then the normals of K at these points are concurrent.

In this paper we shall prove that if P is a triangle, then there is a baricentric formula that describe the curvature of the boundary K at the points A_1, A_2, A_3. We prove also that if K is a three dimensional convex body which is a rotor in a tetrahedron T, and if K intersect each face of T at the points x_1, x_2, x_3, x_4, then the normals lines of K at x_1, x_2, x_3, x_4 generically belong to a one ruling of a quadric surface. (Received September 14, 2016)