Osamu Hatori\* (hatori@math.sc.niigata-u.ac.jp), Department of Mathematics, Faculty of Science, Niigata University, 8050 Ikarashi 2-no-chou, Nishi-ku, Niigata City, 950-2181, Japan. An application of a Mazur Ulam theorem on generalized gyrovector spaces.

A generalized gyrovector space is an exotic normed vector space, which is a generalization of the gyrovector space defined by A.A.Ungar. We apply a Mazur Ulam theorem for the gyrometric preserving maps between GGV's to describe isometries between the convex cones of positive invertible elements of unital  $C^*$ -algebras. (Received August 12, 2015)