1079-05-164 **Brigitte Servatius*** (bservat@wpi.edu), 100 Institute Rd, Worcester, MA 01609-2280.

Kinematics of Zeolites. Preliminary report.

The kinematics of a model of interlinked tetrahedra which was described by H. HARBORTH and M. MOELLER consisting of 16 congruent regular tetrahedra connected via 32 spherical joints was recently investigated by P. FAZEKAS, O. ROESCHEL and the presenter. It was found that although the Gruebler formula gives a theoretical degree of freedom of negative 6 for this kinematic chain, and therefore the model should be rigid, this mechanism admits at least a two-parametric self-motion in the general position. Saturated packings of tetrahedra are used to model Zeolites, which are microporous, aluminosilicate minerals. They have some interesting properties which we attempt to explain mathematically. (Received January 10, 2012)