

1035-05-1504 **Robert W Sternfeld**, 225 Madison Blvd, Terre Haute, IN 47803, and **David Koster, Larry Taylor** and **Raymond Killgrove*** (pain444@yahoo.com). *Latin squares especially order 8 and planes.*

Denes and Keedwell: Latin squares and their applicatons, Academic Press 1974 defines Latin Square page 15, a transversal page 28, main class page 126, standard form page 128. Sternfeld, Roberts, Koster, Killgrove: More on Latin squares and configurations, Congressus Numerantium 176(2005)69-88 defines the directed graph called a local motion, the ALMI invariant, i.e. if two Latin have different ALMI then they lie in different main classes, and shows that the ALMI together with transversal count (almit) is a complete invariant for Latin squares of orders 3, 4, 5, 6, 7. However, when applied to the order 8 main class representatives from Brendan McKay's website (<http://cs.anu.edu.au/bdm/data/latin.html>) we find 49 pairs of squares such that the squares in each pair have identical almit. (Received September 20, 2007)