1053-57-140 **Cody L Patterson*** (cpatters@math.utexas.edu), 10610 Morado Circle, Apartment 2401, Austin, TX 78759. *Some Coxeter groups of CAT(0) dimension three.*

The Coxeter FA_n conjecture states that a Coxeter group Γ acts by isometries on a CAT(0) polyhedral cell complex of dimension n without global fixed points if and only if Γ has an infinite special subgroup of rank $n+1$. This conjecture has been proven for $n = 1$ by Serre and for $n = 2$ by A. Barnhill. I will discuss some classes of Coxeter groups with infinite special subgroups of rank 4 that act without global fixed points on CAT(0) cell complexes of dimension 3. (Received August 31, 2009)