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Arielle M Leitner* (aleitner@math.ucsb.edu), 6510 El Colegio Rd, Apartment 1103, Santa Barbara, CA 93106. *Geometric Transitions of the Group of Diagonal Matrices.*

A *geometric transition* is a continuous path of geometries which abruptly changes type in the limit. We explore geometric transitions of the Cartan subgroup in $SL_n(\mathbb{R})$. For $n = 3$, it turns out the Cartan subgroup has precisely 5 limits, and for $n = 4$, there are 15 limits. For $n \geq 7$, it turns out that there is a continuum of non conjugate limits! (Received September 16, 2014)