1046-05-588 **Elizabeth Moseman*** (`lizz.moseman@usma.edu`), US Military Academy, West Point, NY 12518.
Other Critical Exponents in Coordinate Percolation. Preliminary report.

In coordinate percolation, independent random variables $a_0, a_1, a_2, \ldots, b_0, b_1, b_2, \ldots$ are assigned uniformly on the interal $[0, 1]$. A vertex (i, j) is considered open if $a_i + b_j \leq t$ for a given threshold value t. Previous work by Moseman and Winkler gives an exact function for the the probability of percolation in this scenario. This gives the first critical exponent, concerning the behavior of the probability of percolation above the critical point $t = 1$, as $\beta = \frac{3-\sqrt{5}}{2}$. Specifically, the probability of percolation grows like $(t-1)^\beta$ for t slightly larger than 1. Defining C as the set of all vertices obtainable by open paths from the origin, we define two other critical expons, δ and γ, concerning the size of C at and below the critical threshold $t = 1$. For δ, the probability of $|C| > n$ is approximately $n^{-1/\delta}$ for large n. For γ, the expected value of $|C|$ is approximately $|t-1|^{-\gamma}$ for t slightly less than 1. Bounds are found for these critical exponents. (Received September 08, 2008)