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617 N. Santa Rita Ave, Tucson, AZ 85721. *Mirror Model on the Square Lattice.*

We consider a random walk model on the two-dimensional square lattice, starts at the origin and only turns left and right at each step with equal probability. Going straight and revisiting a bound that has been visited before are not allowed. In this model, turning left or right at each step can be viewed as a walk deflecting by a left or right mirror on each vertex. Therefore, we refer to this random walk model as a mirror model. Here, we study the nature of the mirror model process on the square lattice and investigate its relation to percolation process. We believe that the scaling limit of the mirror model on the square lattice in a bounded domain between two boundary points is the chordal Schramm-Loewner evolution with $\kappa = 6$ (SLE_6). We test this conjecture and find a good agreement with predictions of chordal SLE_6 . (Received September 14, 2018)