1139-60-255   **Jiaoyang Huang*** (`jiaoyang@math.harvard.edu`), 1 Oxford St Science Center, Math Department Room 425E, Cambridge, MA 02138. *Nonintersecting Random Walks and Gaussian Free Field.*

We study β analogues of the discrete nonintersecting random walks, which, in a special case, degenerates to the β-Dyson Brownian motion. We prove that, under mild conditions of the initial data, the fluctuations of the empirical particle density converge to the Gaussian free field. The central observation is that the fluctuations of multi-time linear statistics can be efficiently expressed in terms of the Jack generating function. As a consequence, a rich family of discrete Markov chains on Young diagrams defined by means of Jack symmetric polynomials converge to the Gaussian free field. (Received February 13, 2018)