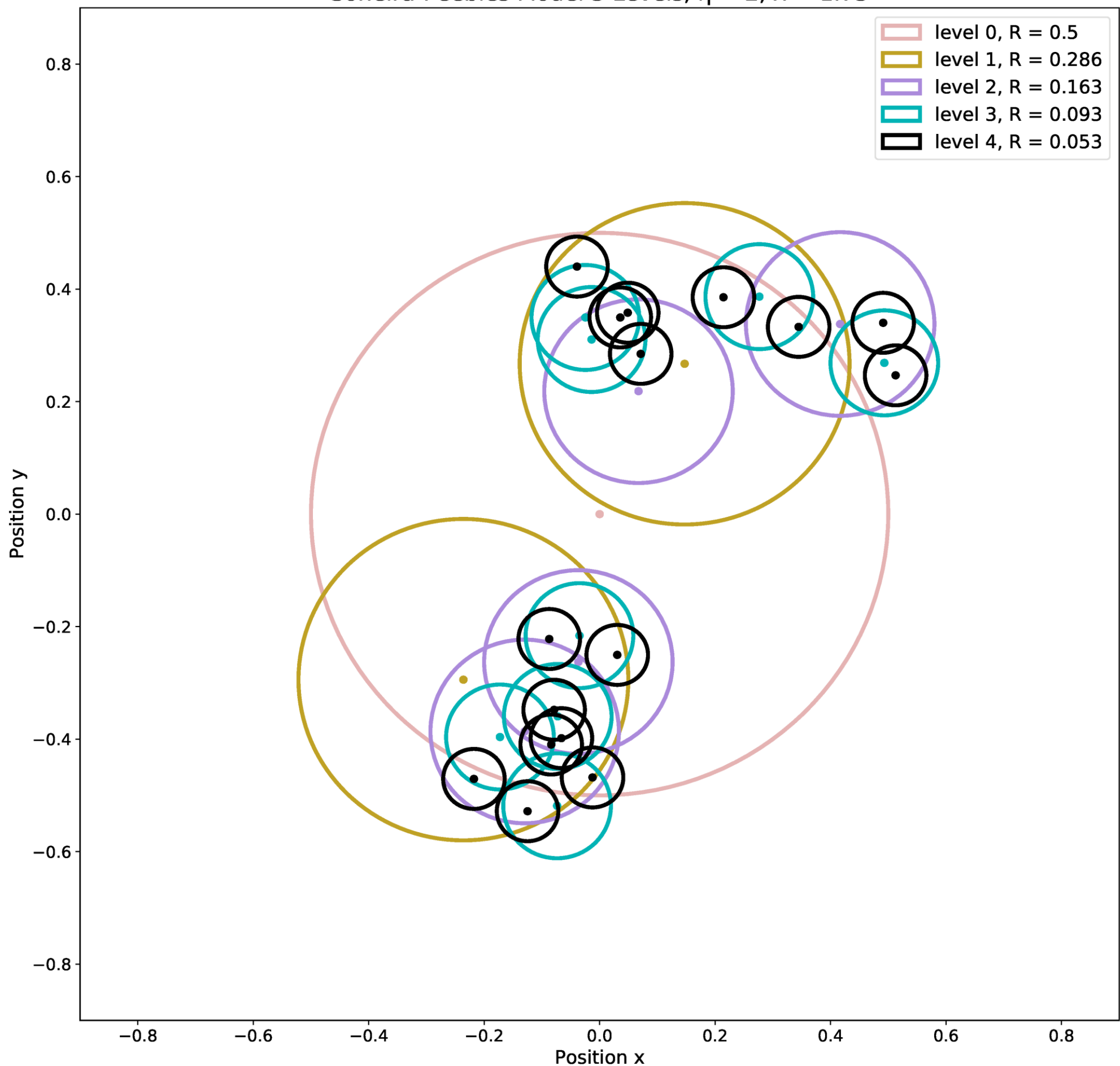


Soneira-Peebles Model 5 Levels, $\eta = 2$, $\lambda = 1.75$



Soneira-Peebles Model

Yi Zhuang

The Soneira-Peebles model (Soneira & Peebles 1978) is applied to study the clustering distribution. Started from level $L = 0$, η is the number of points within each circle at each level, the radius at each level is R / λ^L and total points are η^L . The fractal dimension $D = \log(\eta) / \log(\lambda)$. The corresponding slope in 2D two-point correlation function is $D - 2$.

R. M. Soneira and P. J. E. Peebles, *The Astronomical Journal* 83, 845 (1978).