CORRELATION FUNCTIONS OF THE APM CLUSTERS OF GALAXIES

Sungho Lee and Changbom Park
Department of Astronomy, Seoul National University

We have found that the two-point correlation function of the APM clusters of galaxies has an amplitude much higher than that claimed by the APM group. As the richness limit increases from R = 53 to 80, the correlation length increases from 17.5 to 28.9 h^{-1}Mpc. This indicates that the richness dependence of the APM cluster correlation function is also much stronger than what the APM group has reported. The richness dependence can be represented by a fitting formula r_0 = 0.53 d_c + 0.01, which is consistent with the Bahcall's formula r_0 = 0.4 d_c . We have tried to find the possible reason for discrepancies. However, our estimates for the APM cluster correlation function are found to be robust against variation of the method of calculation and of sample definition.