

B27a 階層的構造形成に伴う銀河の質量成長と星形成史

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The cosmological bound objects were considered to form from the local maxima of cosmological density fluctuations; often assumed to be Gaussian random fields. In order to study the statistics of the objects with hierarchical merging, we propose *skeleton tree formalism*, which can distinguish the episodic merging and the continuous accretion in the mass growth processes, which were not clearly represented in extended Press-Schechter formalism. With the skeleton tree formalism which shows the self-consistency for the statistics, we present the mean growth history of the objects at the fixed mass. This presents that the bound object grows with the accretion firstly, with merging secondly and the growth is suppressed soon after the merger dominates. This mass growth properties affects the star formation history in the halo since the gas accumulation can be efficient when the merger becomes comparable to the accretion. It means that the merger of halos can work as the suppression to the star formation due to the destroy the environment of the gas accretion. This picture about the merger was not discussed before. We present the star formation history including this process.