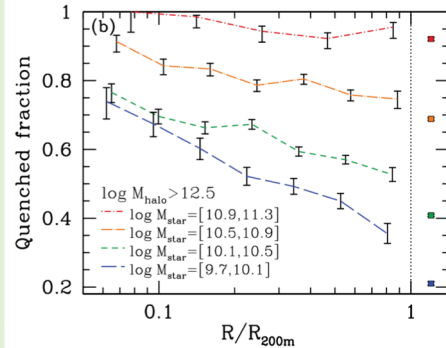# An empirical model for the spatial distribution of cluster galaxies

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Galaxy quenched fraction

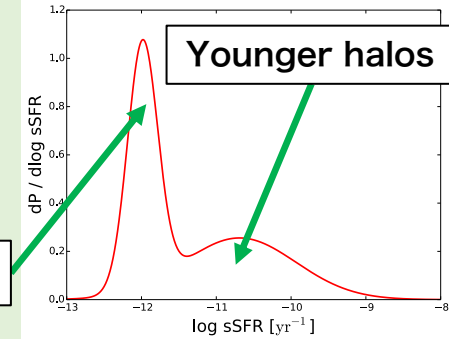The quenched fraction increases towards smaller cluster-centric radius.
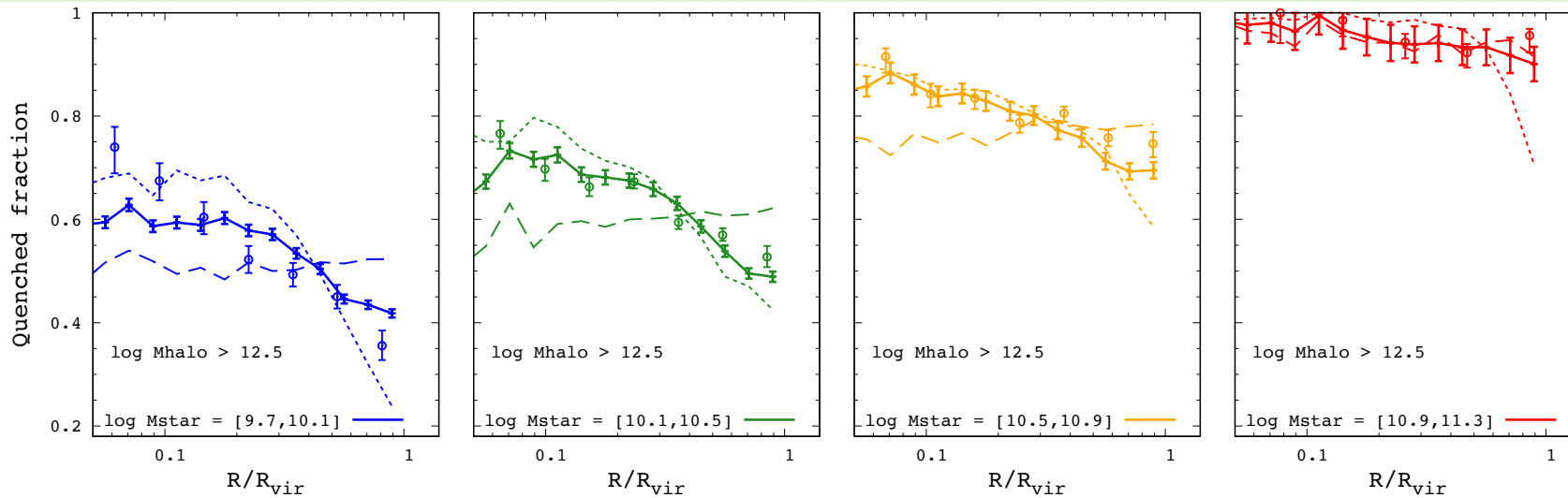
Model: Matching sSFR with halo "age"

Assumption: older halos have galaxies with lower specific star formation rate.

Older halos

sSFR distribution

Younger halos

Radial gradient of quenched fraction

Our model reproduces the observed negative gradient of the quenched fraction.

-> Both the internal and environmental processes are important.