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Big Data applications for Black hole Evolution Studies

Modelling galaxy evolution via semi-empirical models

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7 February 2024

This project (PI: F. Shankar) has received funding from the European Union's Horizon 2020 research and innovation programme under the Marie Skłodowska-Curie grant agreement No 860744.

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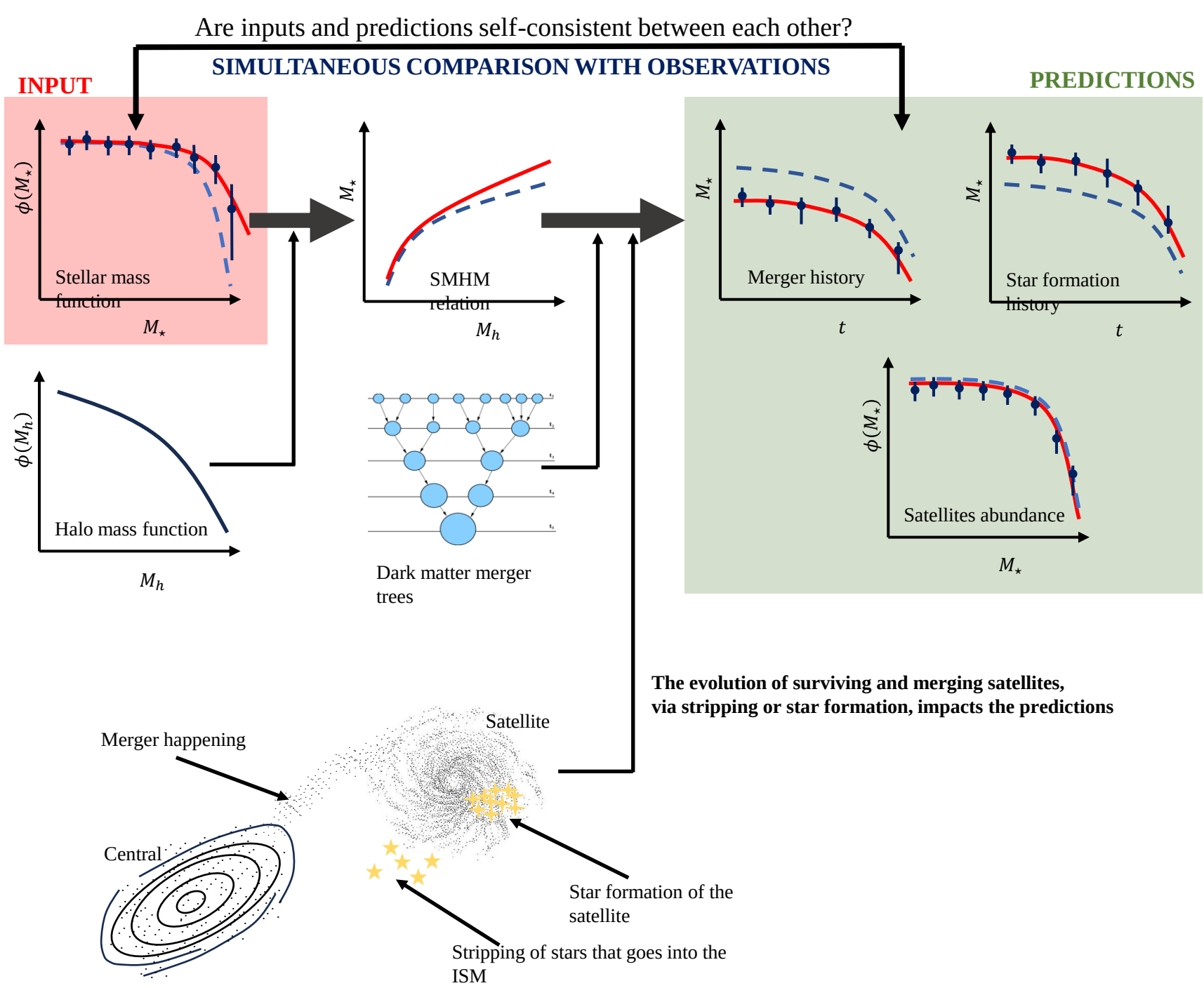
DECODE

Discrete statistical
sEmi-empiriCal mODEl



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Quenching

- Mass quenching
- Morphological quenching
- Environmental quenching
- Feedback from central SMBHs
- Mergers

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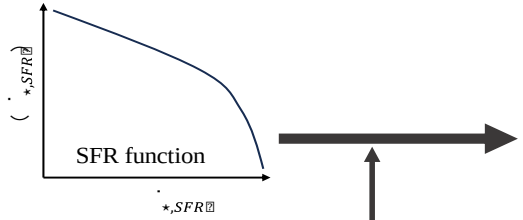
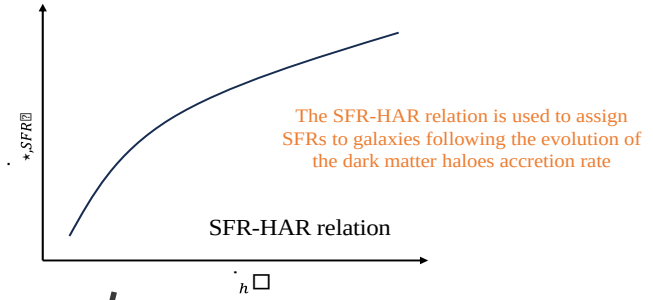
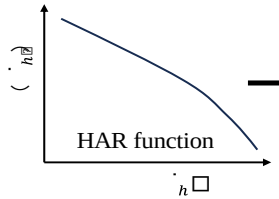
OBSERVATIONAL INPUT



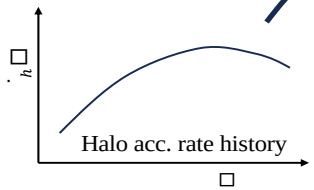


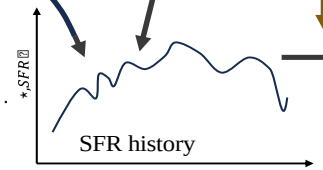
The SFR-HAR relation is used to assign SFRs to galaxies following the evolution of the dark matter haloes accretion rate

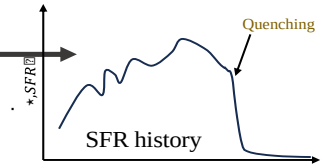
DARK MATTER SIMULATION

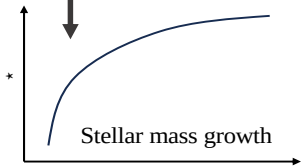


Quenching mechanism jumps in here (e.g., halo quenching, black hole quenching)

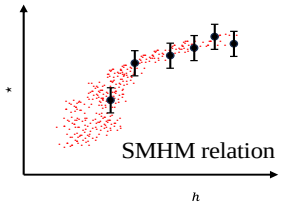


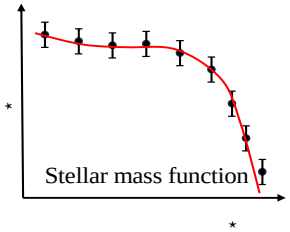


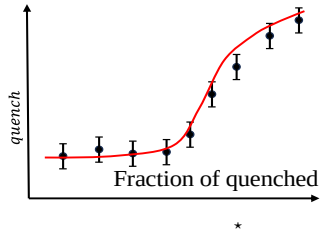




PREDICTIONS AND COMPARISON WITH OBSERVATIONAL DATA







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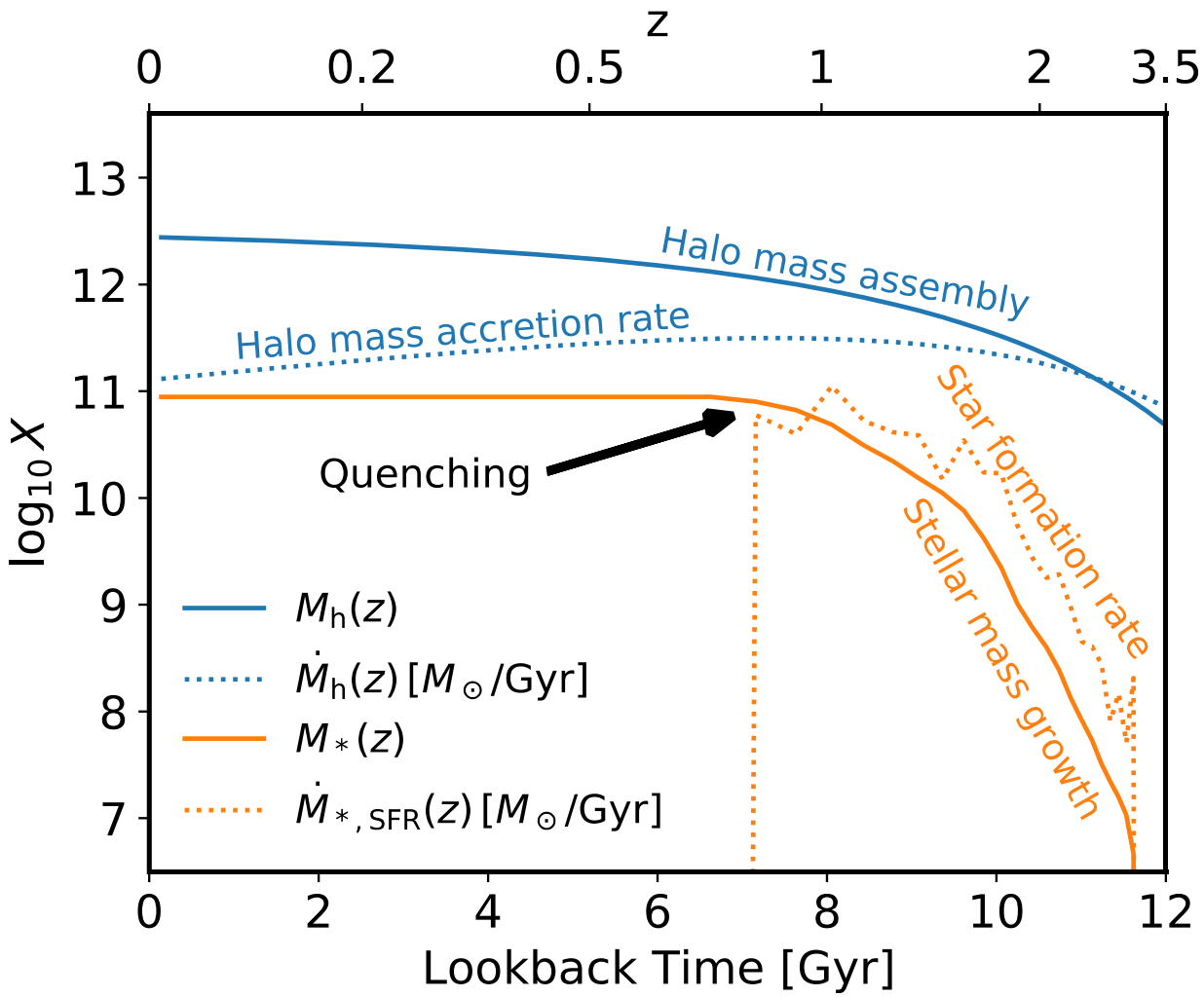
Halo quenching



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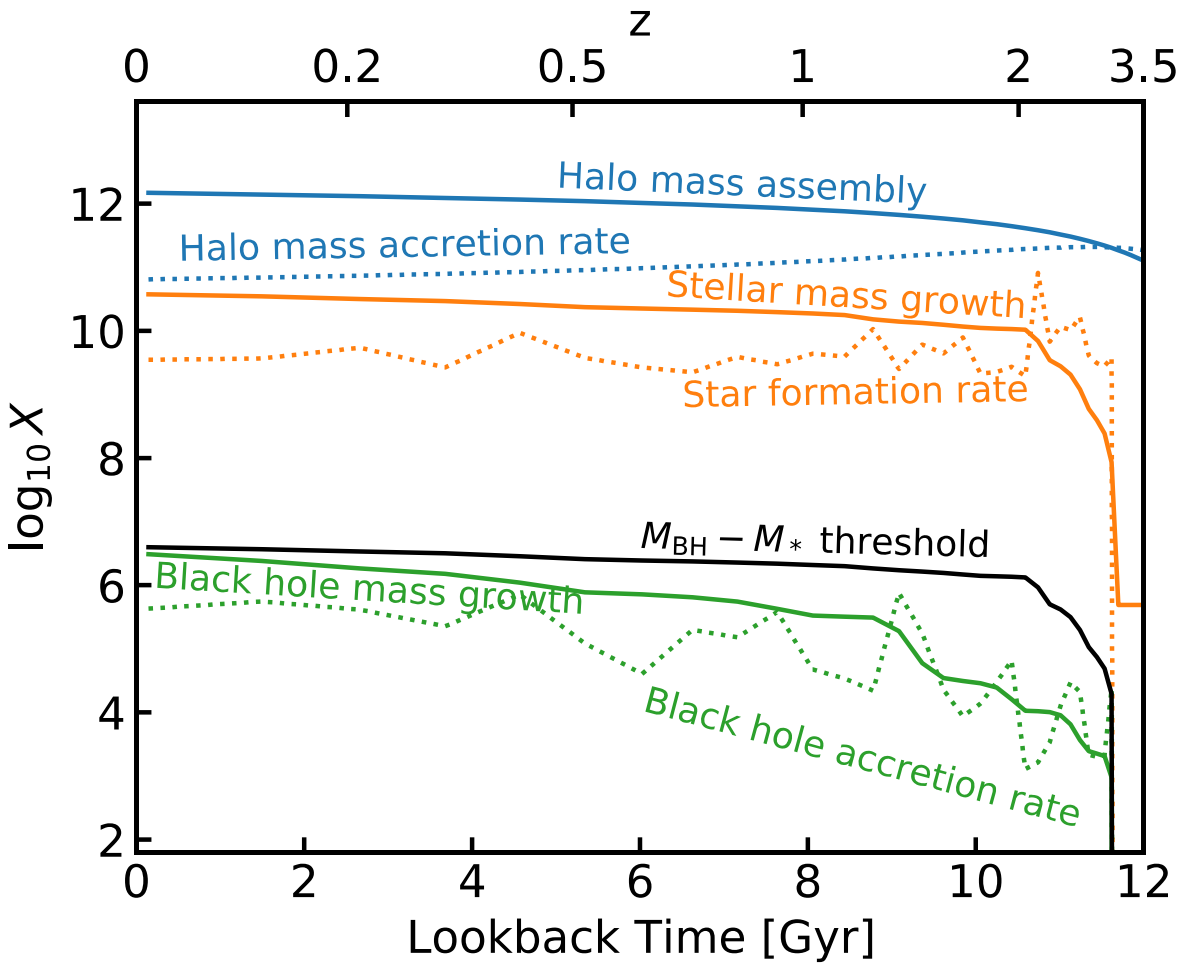
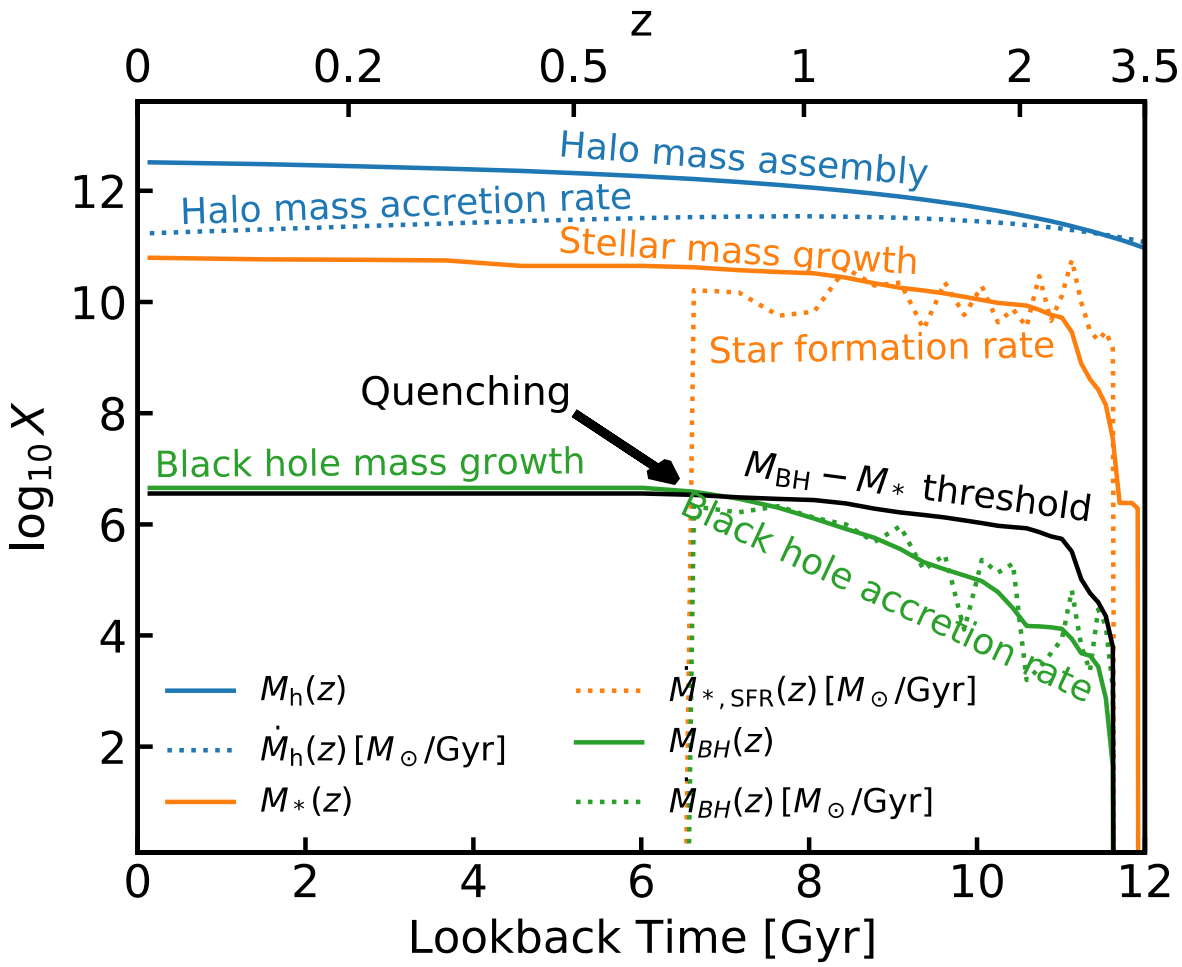
Black hole quenching





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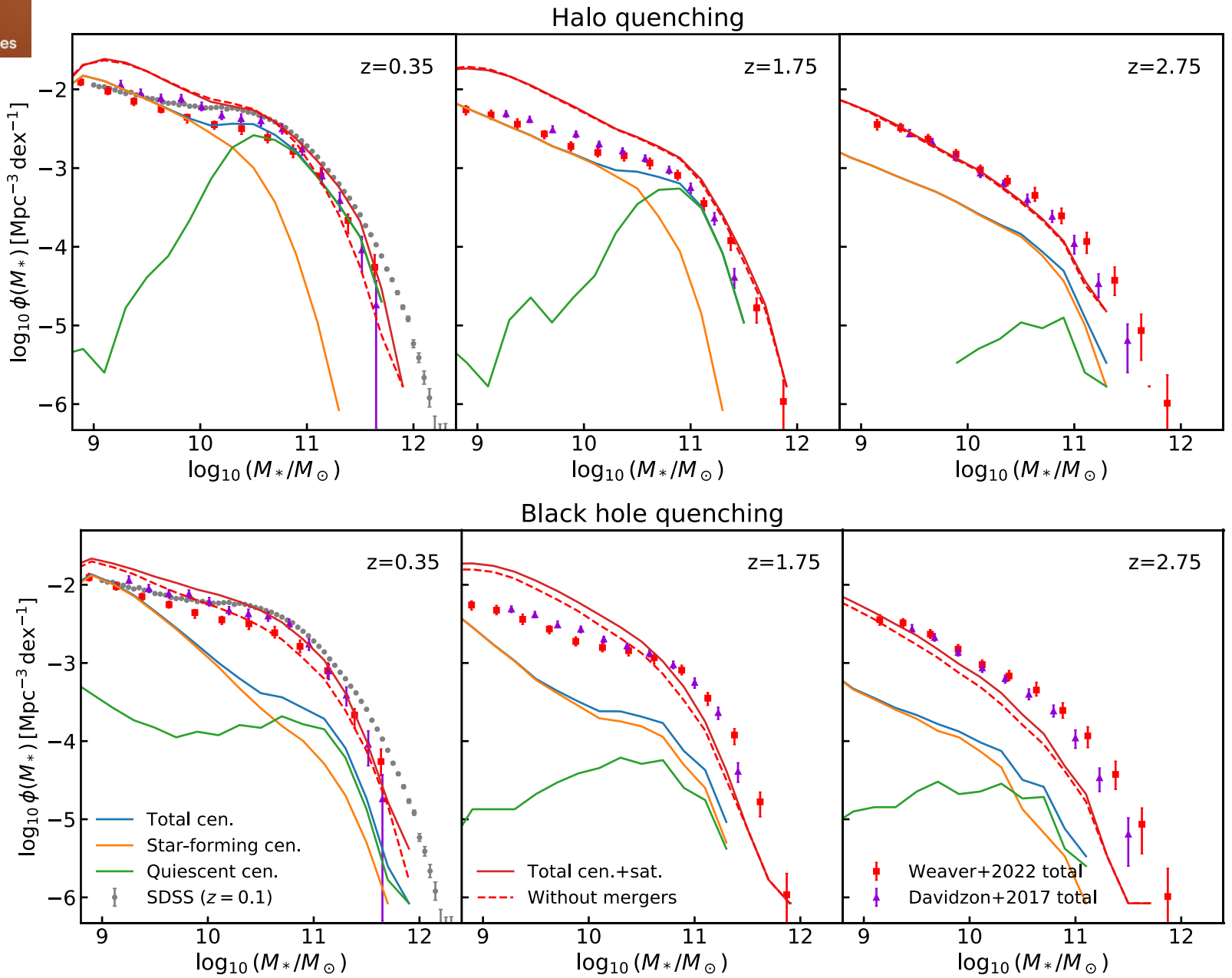
Results



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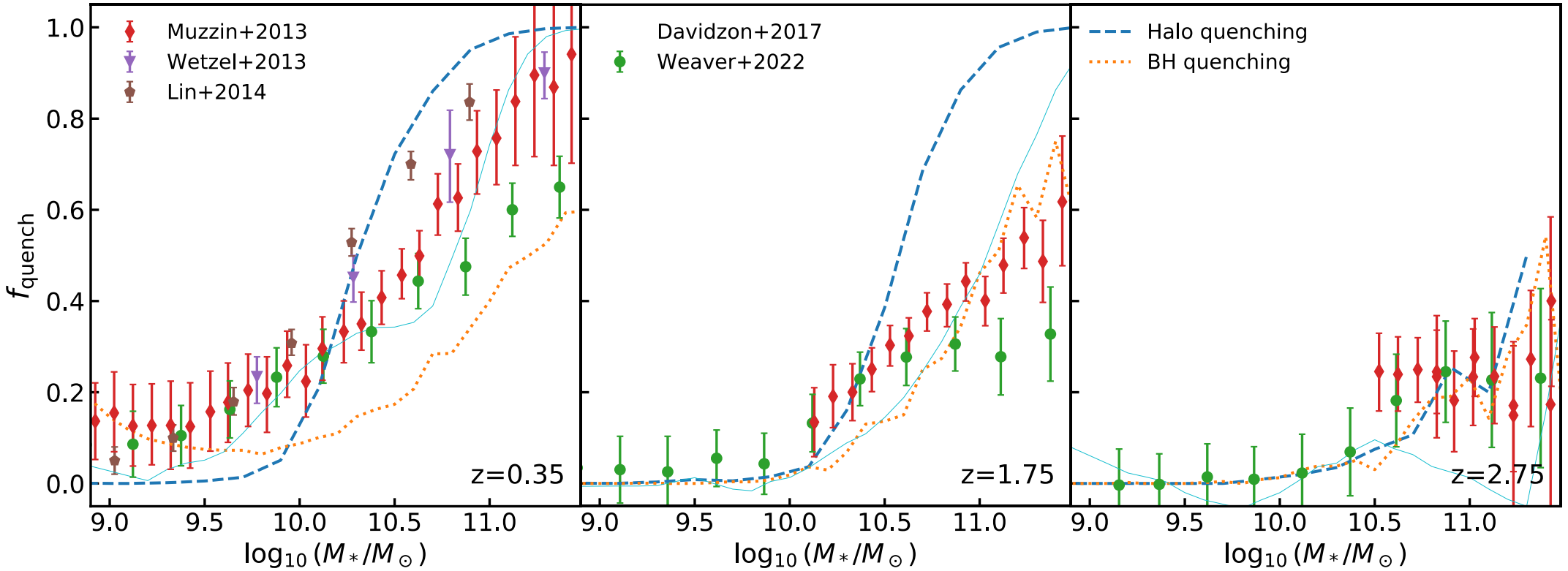
Results



Thank you

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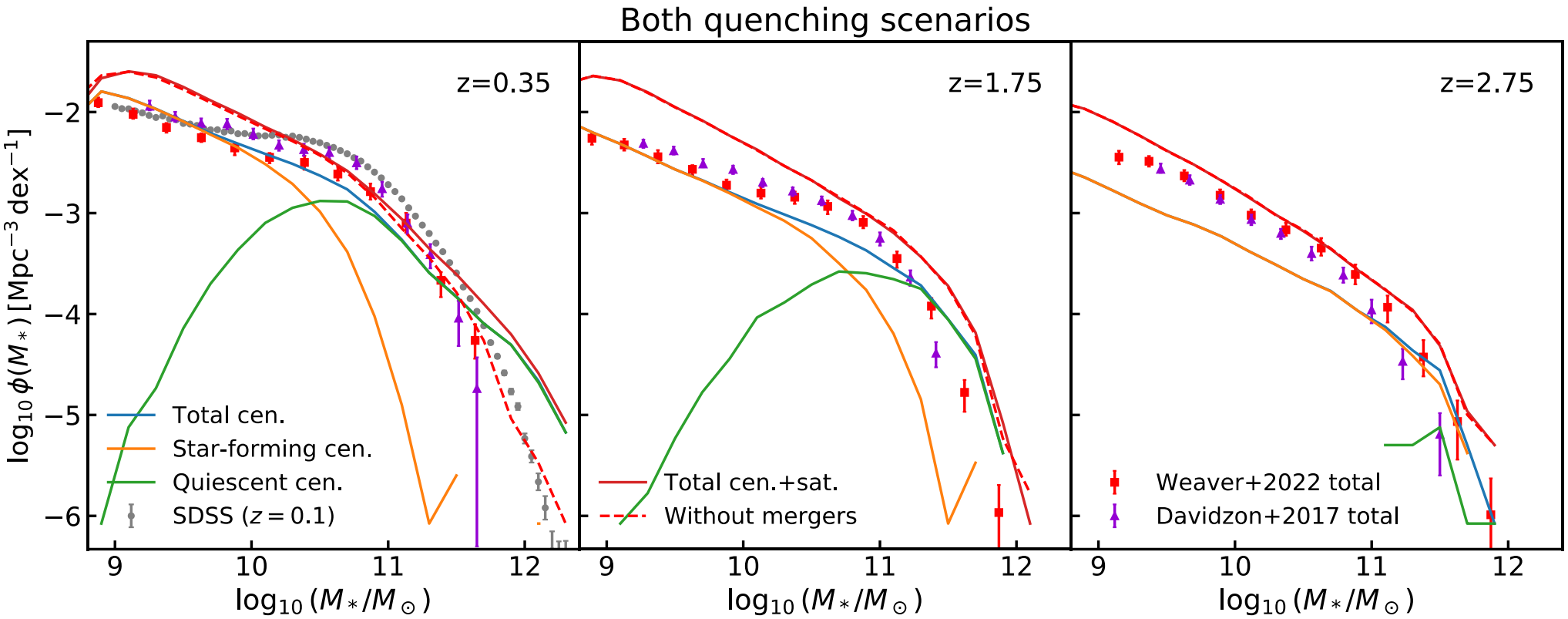
Results



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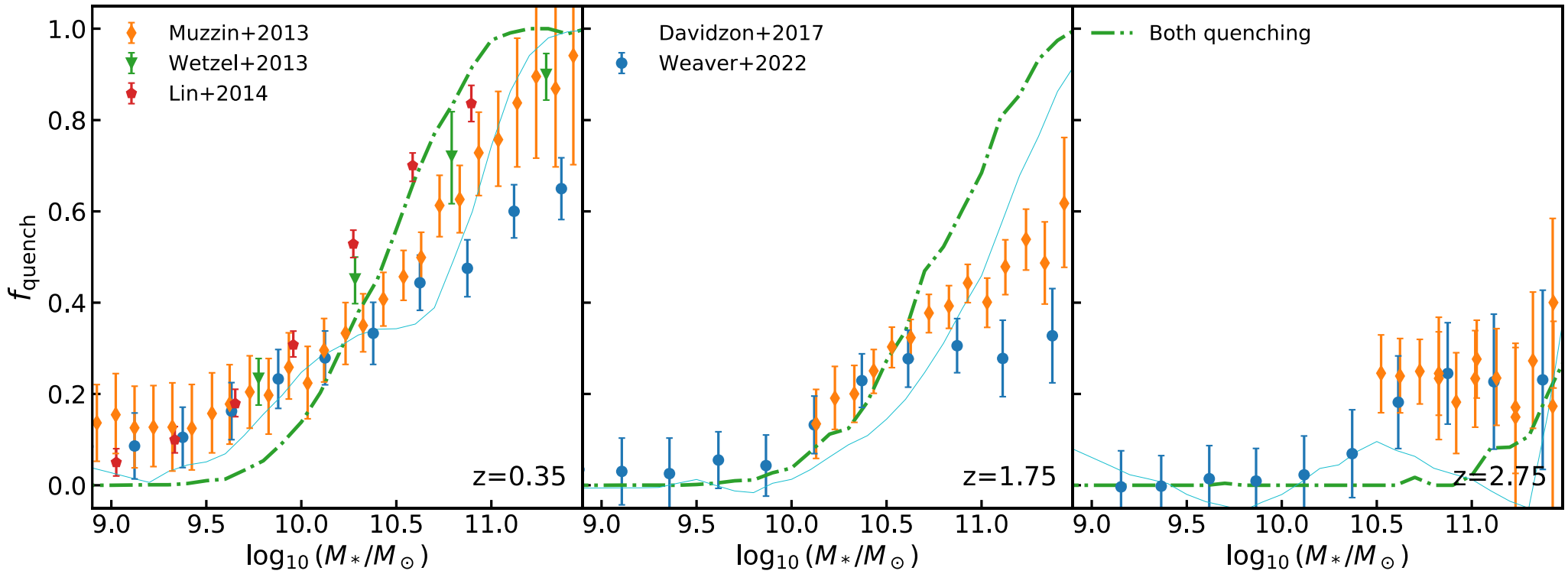
Results



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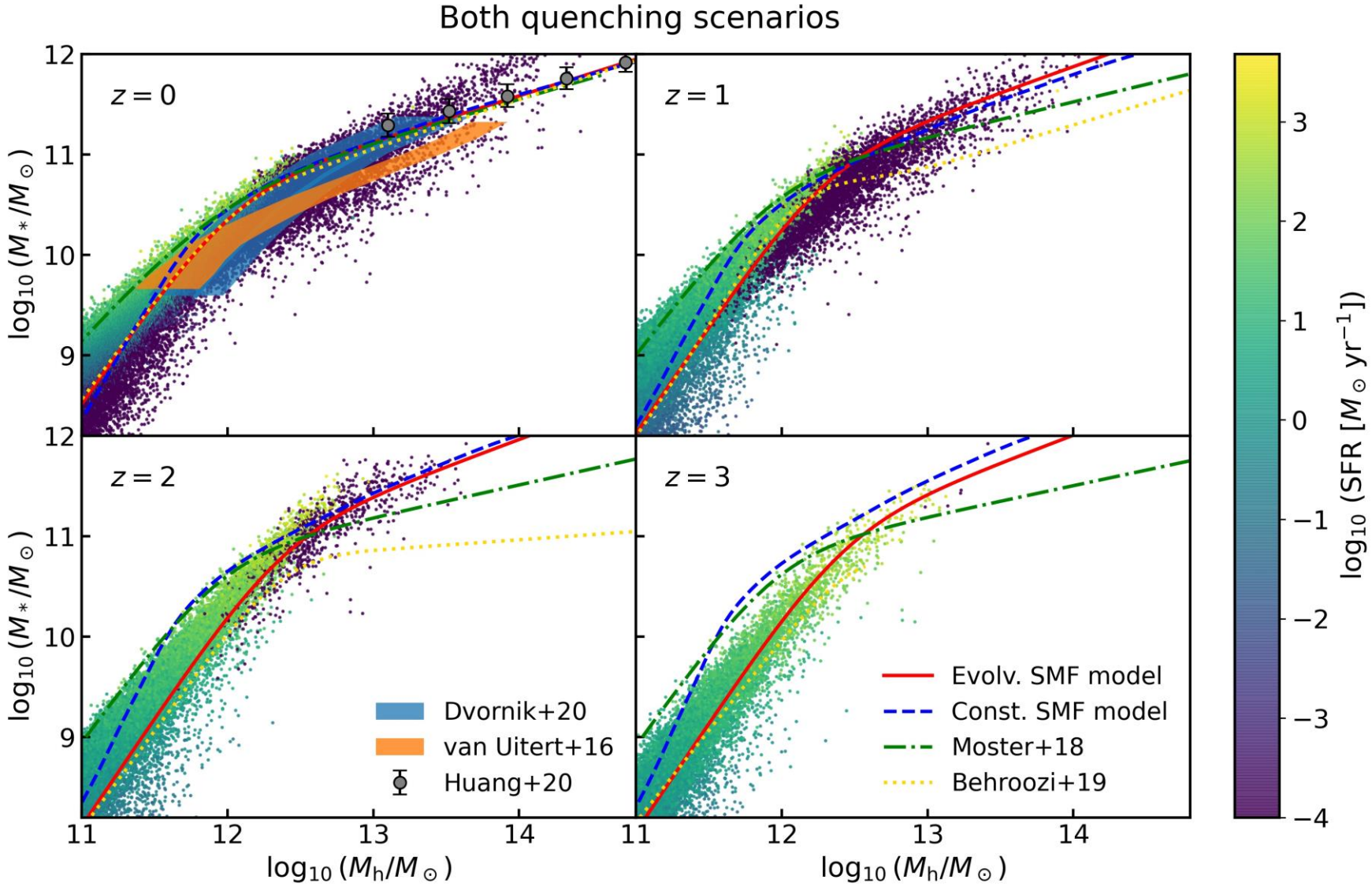
Results