THE INTRINSIC ALIGNMENT OF GALAXIES ARE A NUISANCE

THE IMPACT OF SELF-INTERACTING DARK MATTER ON THE INTRINSIC ALIGNMENTS OF GALAXIES

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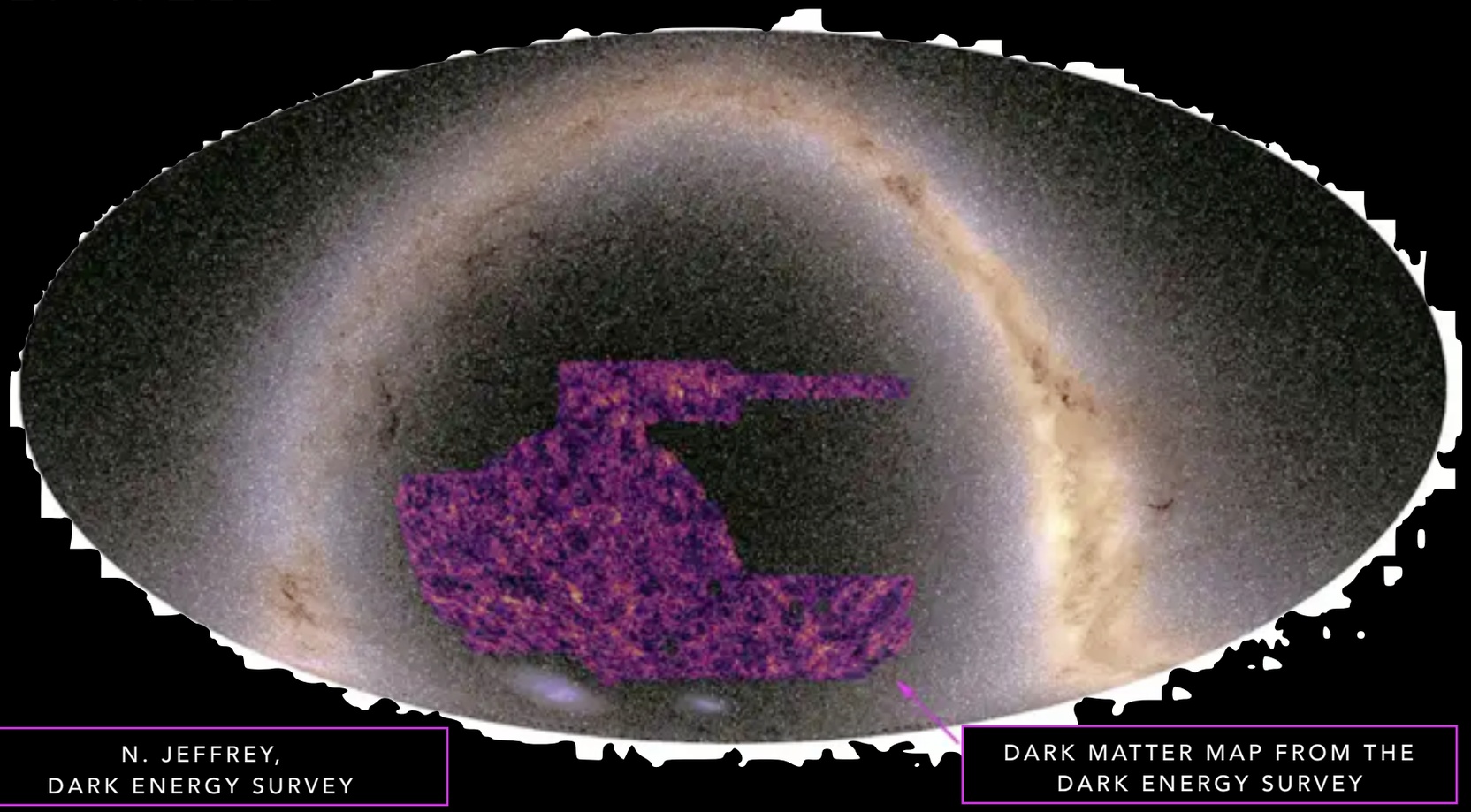
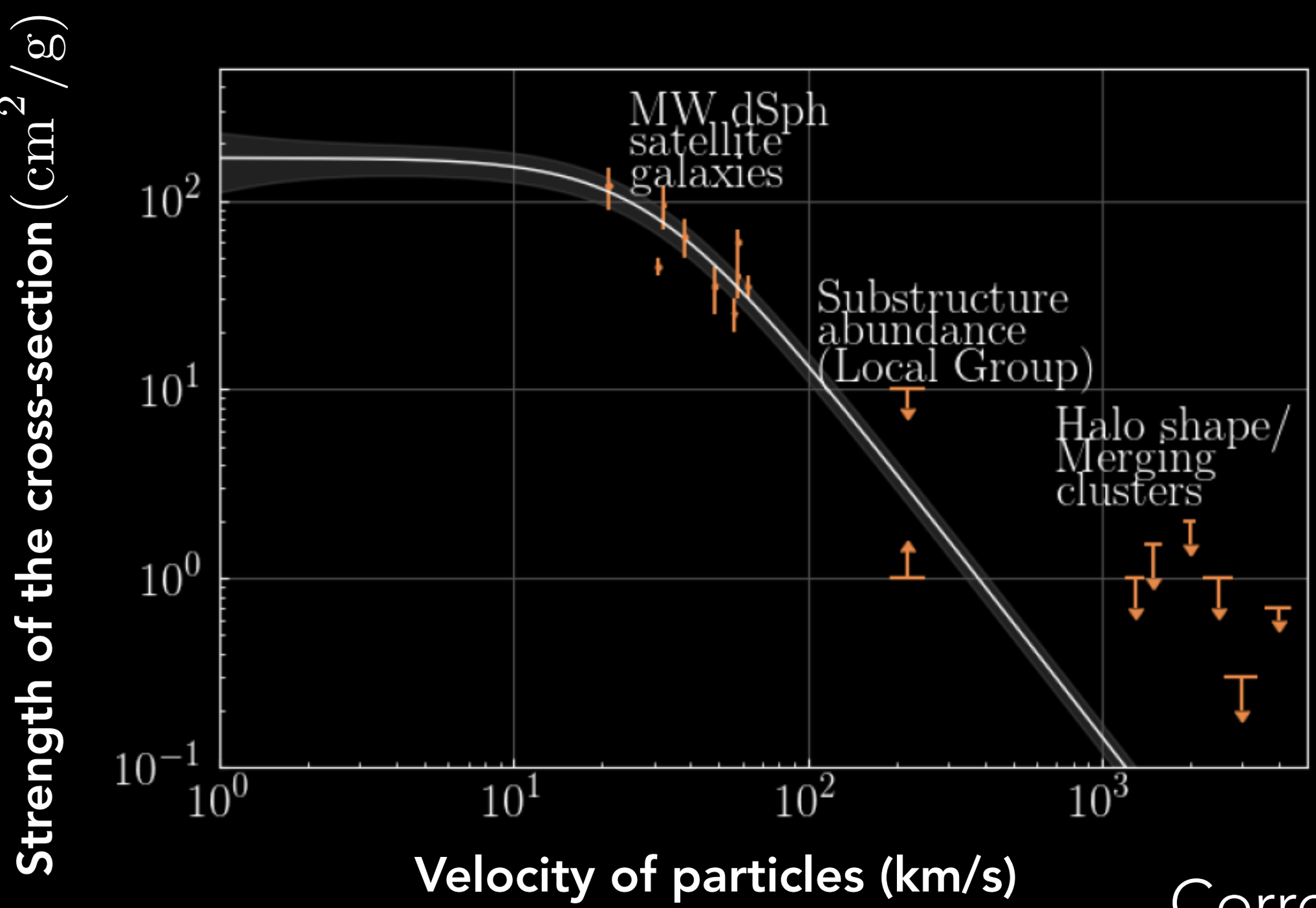
ARXIV: 2104.02093

THE COLD & COLLISIONLESS DARK MATTER PARADIGM EXPLAINS THE LARGE-SCALE DISTRIBUTION OF MATTER EXTREMELY WELL



SIGNALS OF COLLISIONAL DARK MATTER?



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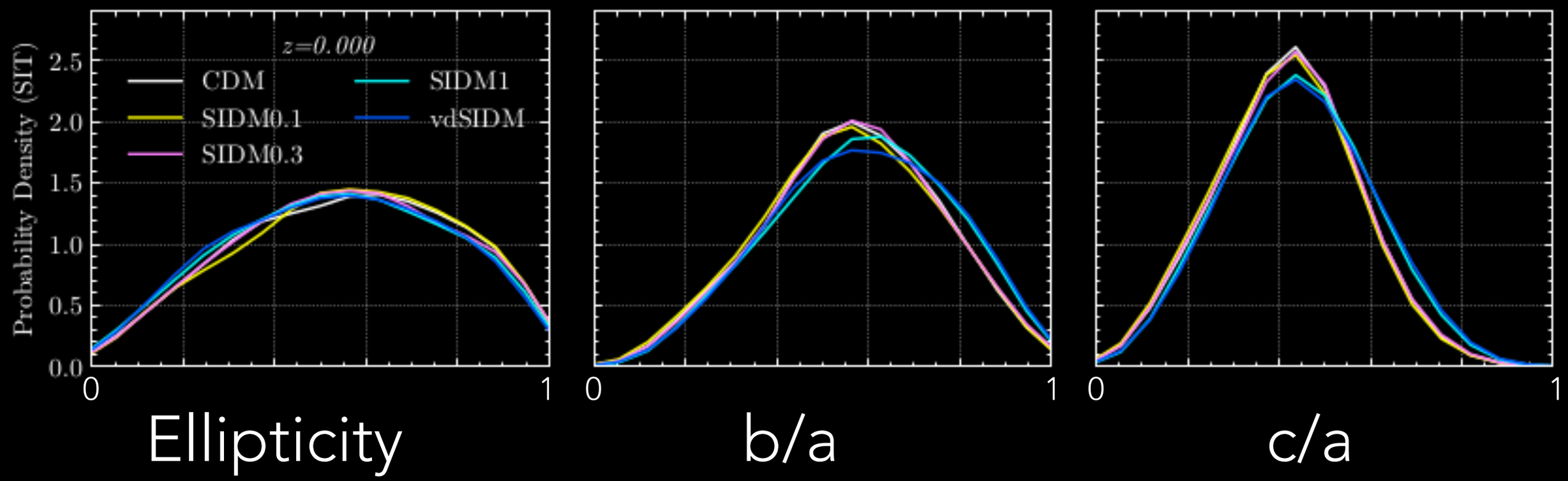
DARK MATTER SELF-INTERACTION MAKE CENTRAL GALAXIES ROUNDER



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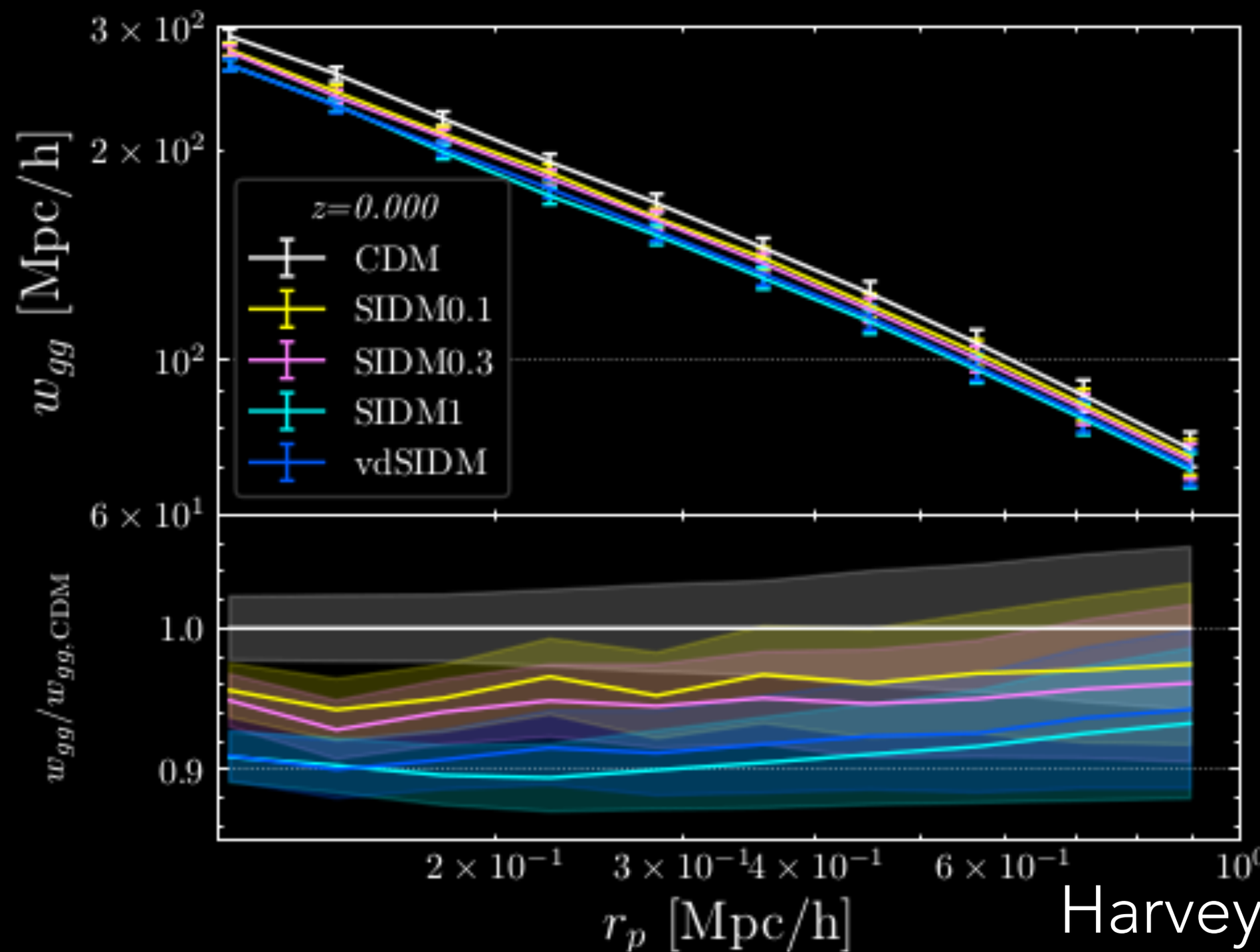
THEY ALSO SUPPRESS THE CLUSTERING (OF ALL GALAXIES)



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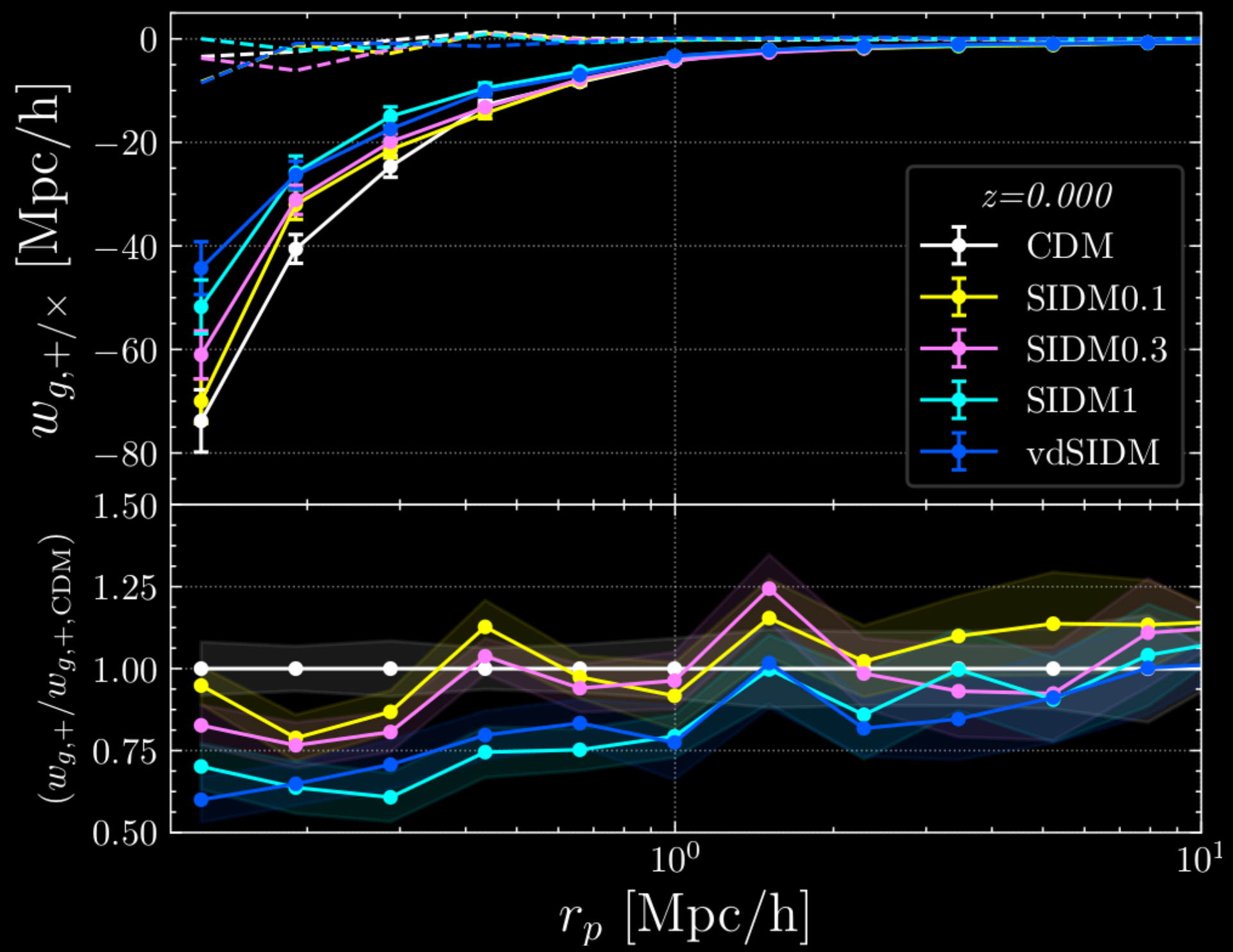
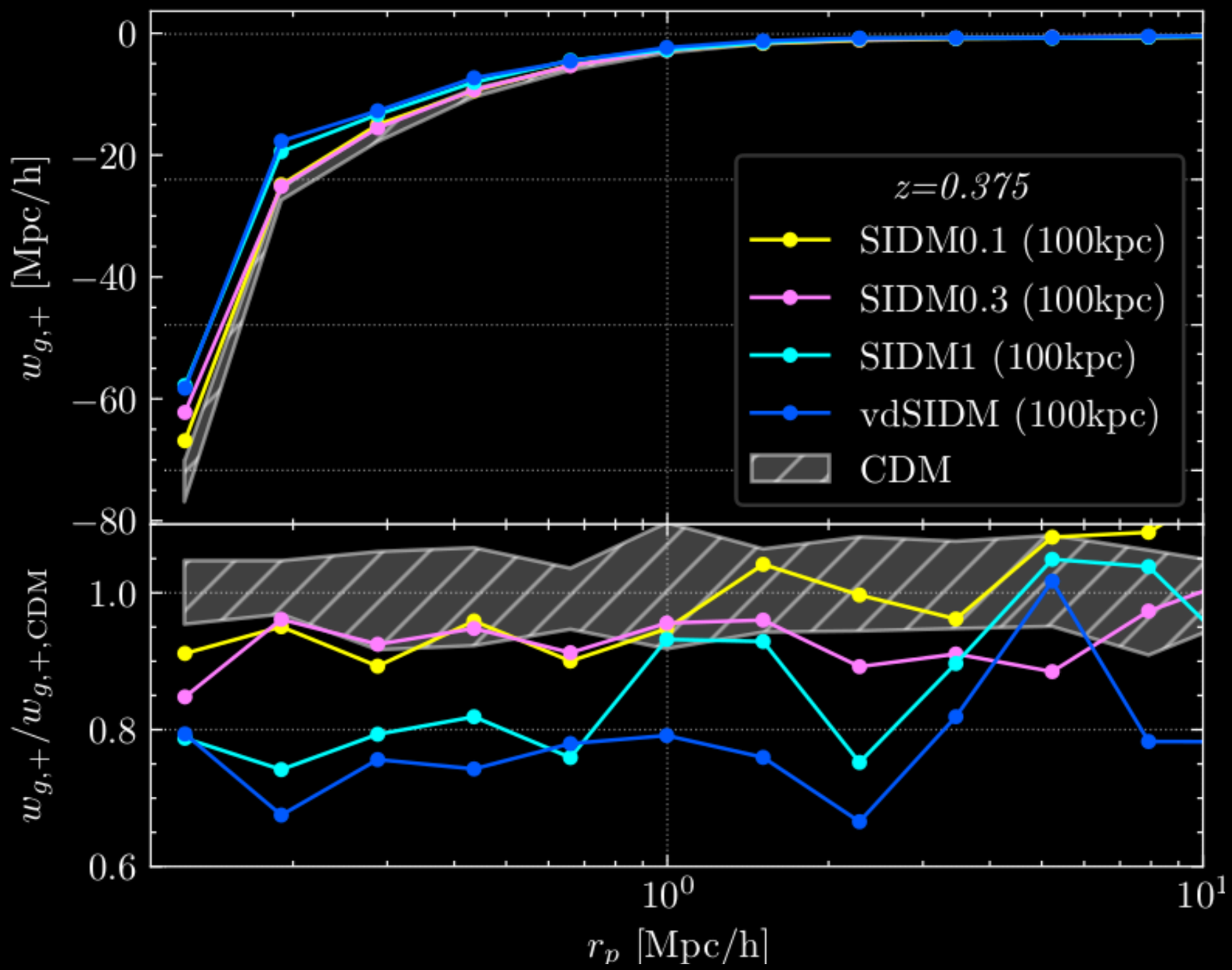
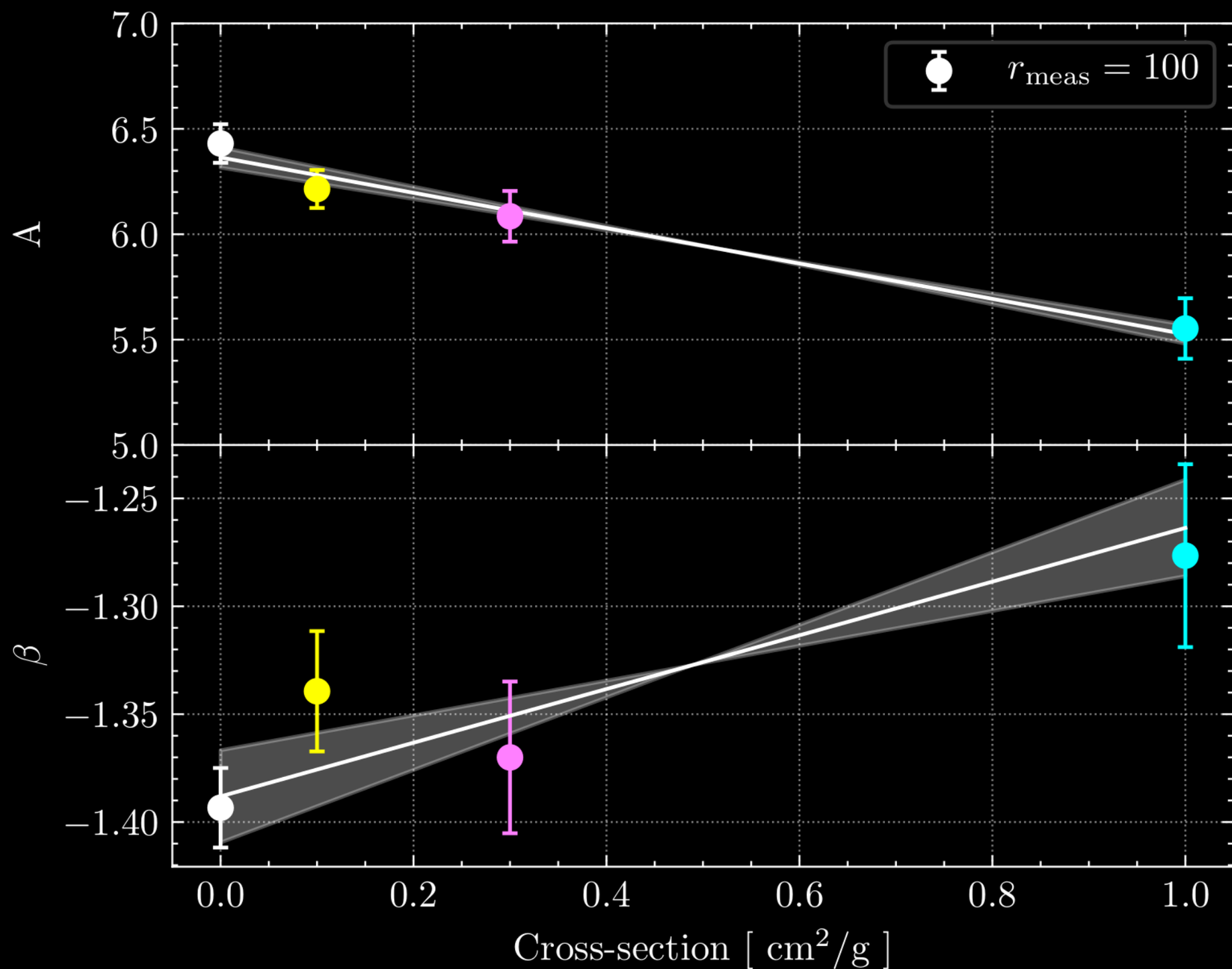
RESULTING IN A SUPPRESSED SHAPE (CENTRALS) - POSITION (ALL GALAXIES) CORRELATION



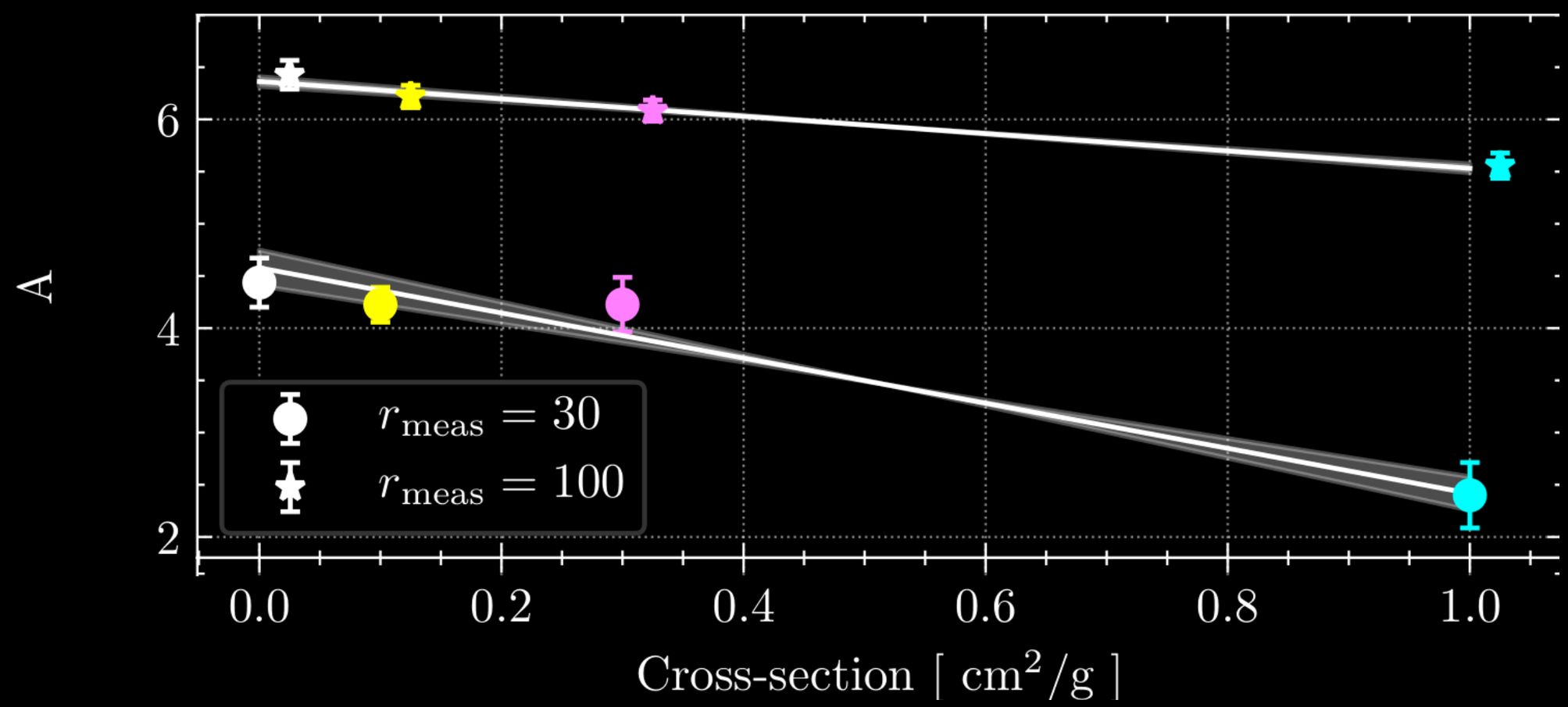
THAT IS POTENTIALLY DISTINGUISHABLE FROM BARYONIC PHYSICS



DARK MATTER SELF-INTERACTIONS IMPRINT A SCALE DEPENDENT CHANGE ON THE INTRINSIC ALIGNMENT OF GALAXIES



MEASURING THE AMPLITUDE WITH DIFFERENT SHAPE-MEASUREMENT METHODS MAY ALSO CONSTRAIN



IT MAY BE POSSIBLE TO CONSTRAIN SELF-INTERACTIONS WITH EUCLID IN THE FUTURE.