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Studying galaxy troughs and ridges using Weak Gravitational Lensing with the Kilo-Degree Survey

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ABSTRACT
TBW

Key words: gravitational lensing: weak – Surveys – methods: statistical – galaxies: haloes – cosmology: dark matter, theory – gravitation.

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1 INTRODUCTION

Write the beginning

2 DATA

2.1 KiDS source galaxies

Write the beginning. Need to know:

- What changes as we go to KiDS-1000 (K1000 paper?).

2.2 GAMA foreground galaxies

Write the whole.

2.3 KiDS foreground selection

Still need to know:

- Maciek's GL-KiDS selection criteria for K1000.
- Angus' stellar mass method for K1000.

2.4 MICE mock galaxies

Write the whole.

2.5 Bahamas mock galaxies

Written by Kyle?

3 DATA ANALYSIS

3.1 Isolated galaxy selection

Write the beginning. Still need to know:

- how to test the isolation criterion.

3.2 Lensing measurement

Write the beginning. Still need to know:

- How (if?) the GGL-pipeline changes with K1000.

3.3 Conversion to radial acceleration

Still need to know: whether we will use the SIS assumption or linear interpolation.

- Test the SIS assumption using the Bahamas simulation.

3.4 Theoretical predictions

3.4.1 Analytical CDM model

Written by Kyle?

3.4.2 Modified Newtonian Gravity

Write the whole.

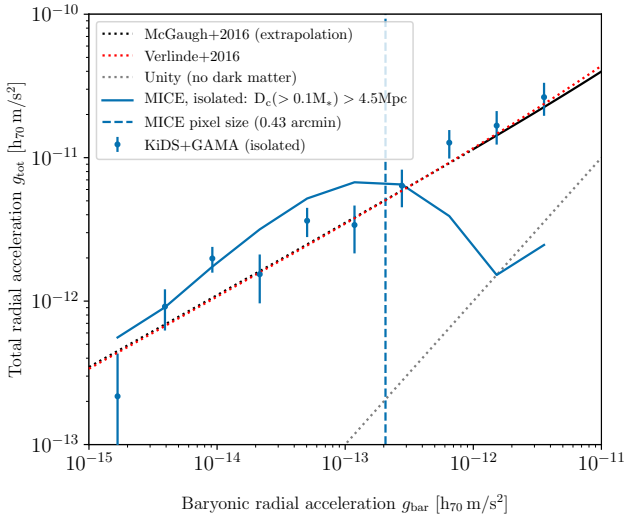

Figure 1. TBW

3.4.3 Emergent Gravity

Write the whole.

4 RESULTS

Write when the results are ready. I still need:

- The K1000 lensing catalogues with ANNz redshifts and stellar masses.
- The results from the Bahamas simulation.

4.1 Isolated galaxies

4.2 Stellar mass bins

5 DISCUSSION AND CONCLUSION

Write at the end.

ACKNOWLEDGEMENTS

Write at the end.

This paper has been typeset from a TEX/LATEX file prepared by the author.

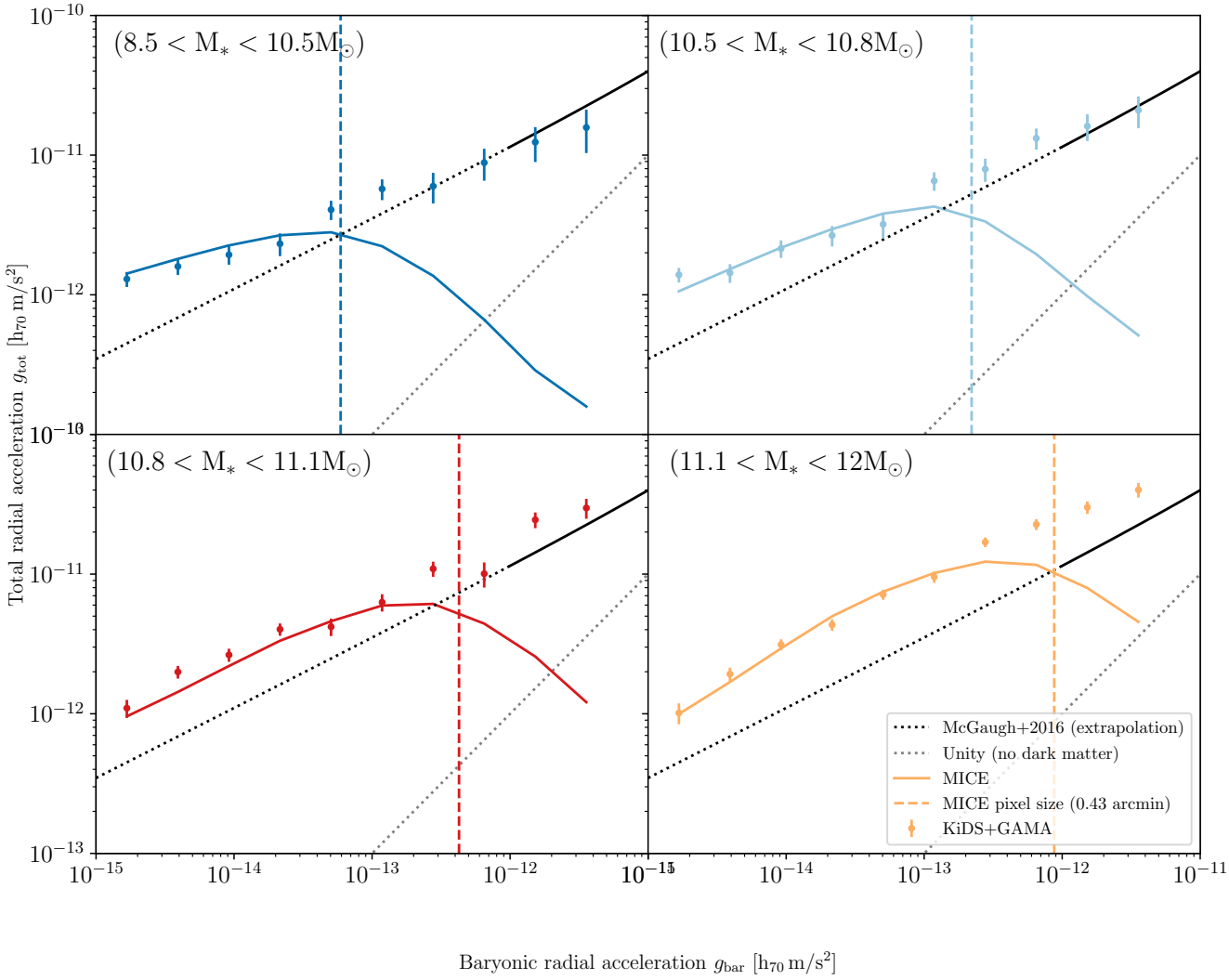
(8.5 < M* < 10.5M⊙)
(10.5 < M* < 10.8M⊙)
(10.8 < M* < 11.1M⊙)
(11.1 < M* < 12M⊙)
McGaugh+2016 (extrapolation)
Unity (no dark matter)
MICE
MICE pixel size (0.43 arcmin)
KiDS+GAMA
Total radial acceleration $g_{\rm tot}$ [h_{70} m/s^2]
Baryonic radial acceleration $g_{\rm bar}$ [h_{70} m/s^2]

Figure 2. TBW

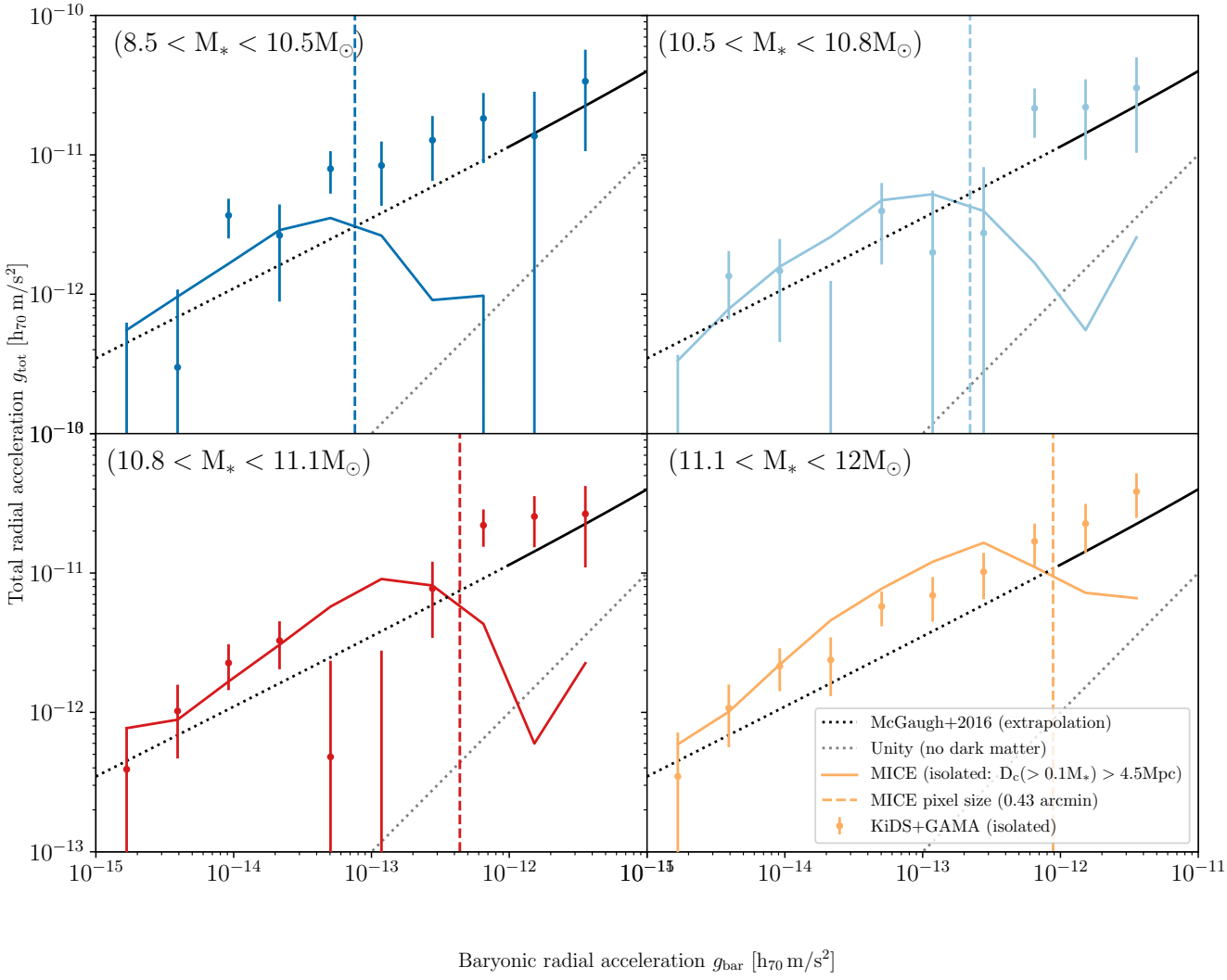

Figure 3. TBW

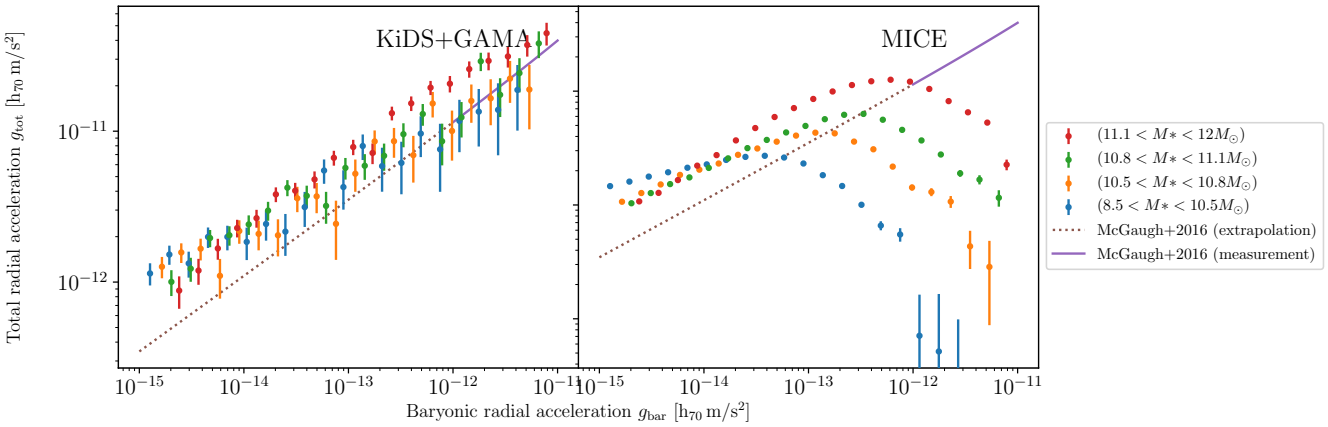

Figure 4. TBW