

# Finding the Missing Dwarfs: a challenge to CDM?

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## Summary

No explanation exists so far for the the observed dearth of dwarf galaxies in the Local Volume compared to the large number of dark matter halos predicted by CDM. By means of simple models together with high-resolution cosmological simulations we investigate the impact of reionization and stellar feedback, as well as observational systematics, on the observed of the velocity function of galaxies and its use as a cosmological probe. Despite the importance of reionization, extreme feedback from stars seems to be the only alternative to reproduce the abundance of dwarfs. However, invoking stellar feedback as a solution results in tensions with several other observational constraints including the abundance of star-forming dwarfs, the number of satellites around the MW and M31, and the baryonic Tully-Fisher relation.

## Based on (arXiv number)

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