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# J-factors for Velocity-Dependent Dark Matter Annihilation

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If dark matter annihilation is velocity dependent, then the J-factors associated with any astrophysical target depend on the full dark matter phase space distribution. We calculate these velocity-dependent J-factors for a variety of targets and a variety of choices for the velocity-dependence of DM annihilation. Significantly, we find that the choice of velocity-dependence affects the relative importance of different dwarf spheroidal galaxies for dark matter searches, relative to each other and to the Galactic Center, and can affect the morphology of any signal from the Galactic Center.

## Summary

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