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Estimating J-factors of dSphs for indirect dark matter detections

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The TeV scale WIMP having a weak charge (e.g. Wino, Higgsino) recently attracts many attentions. While such a WIMP is hard to be detected at collider and direct dark matter detection experiments, it is expected to be efficiently searched for at indirect dark matter detection experiments, for its annihilation cross section is boosted by the Sommerfeld enhancement. Among various indirect detection methods, observing gamma-rays from dSphs are thought to be the most robust way to detect the WIMP. On the other hand, we have to know how the WIMP is distributed inside each dSph to predict the signal flux accurately. In this talk, I would like to talk about recent developments on determining the distributions (i.e. J-factors) based on the paper arXiv:1603.08046.

Summary

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