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Erratum

Erratum to "Results from the search for dark matter in the Milky Way with 9 years of data of the ANTARES neutrino telescope" [Phys. Lett. B 769 (2017) 249–254]

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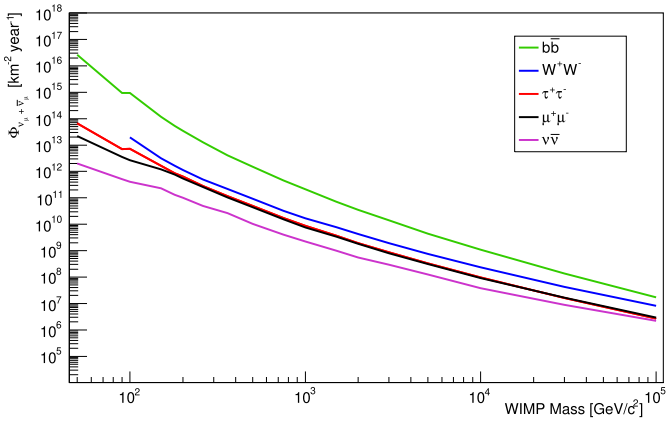

Fig. 3. 90% C.L. upper limits on the neutrino flux from WIMP annihilations in the Milky Way as a function of the WIMP masses for the different channels considered. For this plot the NFW profile was used.

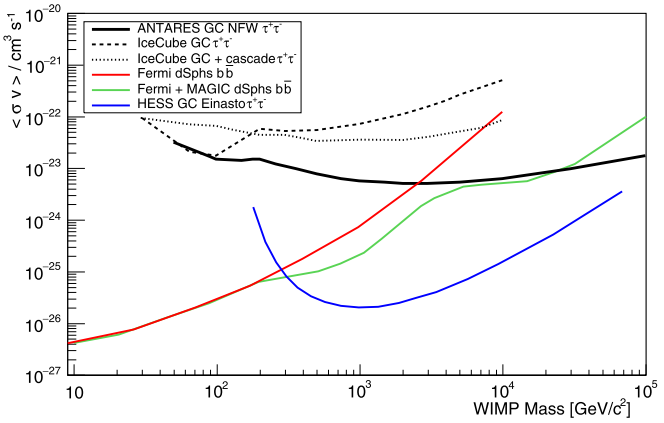

Fig. 4. 90% C.L. limits on the thermally averaged annihilation cross–section, $\langle \sigma v \rangle$, as a function of the WIMP mass in comparison to the limits from other experiments [2–6]. The results from IceCube and ANTARES were obtained with the NFW profile.

Limits on the neutrino flux for a given mass M_{WIMP} and annihilation channel are calculated as in Eq. (7) (page 252), with the integrated acceptances defined in Eq. (8) (page 252) as the effective area averaged over the neutrino energy. A numerical approximation of WIMP annihilation spectra, adapted from [1] with a too coarse binning, led to an overestimation of the integrated acceptances for dark-matter induced neutrino events. The spectra were replaced with a fine-binned version both in the likelihood and in the acceptances. The main change is a weaker limit for WIMP masses larger than 1 TeV/c^2. Updated versions of Figs. 3–6 are provided.

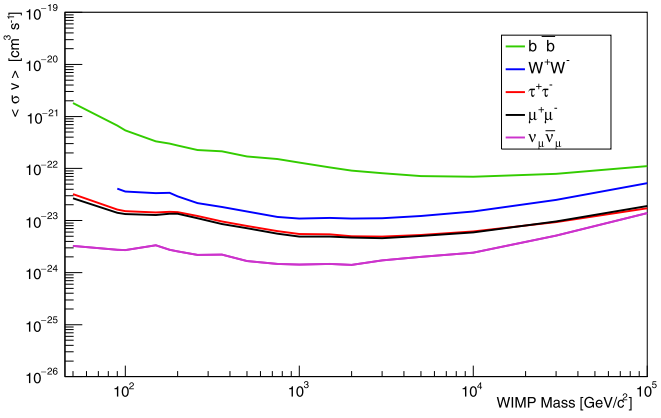

Fig. 5. 90% C.L. limits on the thermally averaged annihilation cross-section, $\langle \sigma v \rangle$, as a function of the WIMP mass for all annihilation channels using the NFW halo profile.

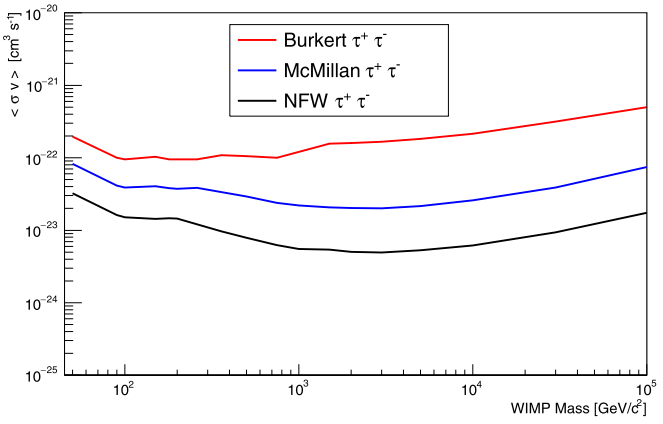

Fig. 6. 90% C.L. limits on the thermally averaged annihilation cross–section, $\langle \sigma v \rangle$, as a function of the WIMP mass for the three considered halo models for the $\tau^+\tau^-$ channel.

References

[1] M. Cirelli, et al., J. Cosmol. Astropart. Phys. 1103 (2011) 051.
[2] M.G. Aartsen, et al., IceCube Collaboration, Eur. Phys. J. C 75 (2015) 492.
[3] M.G. Aartsen, et al., IceCube Collaboration, Eur. Phys. J. C 76 (2016) 531.
[4] M. Ackermann, et al., Fermi-LAT Collaboration, Phys. Rev. Lett. 115 (2015) 231301.
[5] R. Caputo, M.R. Buckley, P. Martin, E. Charles, A.M. Brooks, A. Drlica-Wagner, J.M. Gaskins, M. Wood, Phys. Rev. D 93 (2016) 062004.
[6] H. Abdallah, et al., HESS Collaboration, Phys. Rev. Lett. 117 (2016) 111301.