

ERRATUM: “DARK MATTER DECAY AND ANNIHILATION IN THE LOCAL UNIVERSE: CLUES FROM *FERMI*” (2011, *ApJ*, 726, L6)

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The authors corrected a mistake in the computation of the area assigned to each pixel in the signal maps, which was missing a factor of $0.5\pi \cos(b)$. While this error is not very important at mid-latitudes, the area of the pixels at the Galactic equator is 57% larger than previously estimated (hence lowering the signal), and is a factor of 2.5 smaller at the position of Virgo ($b \simeq 75^\circ$), increasing the previously estimated signal arbitrarily as we approach to the Galactic poles. The signal-to-noise (S/N) values of Table 1, as well as the maps in Figure 2 of the published version of the paper, are affected, and we report below the corrected version of both the table and the figure (Table 1 and Figure 1, respectively). Note that the dark matter density and density-squared maps of Figure 1 of the published version of the paper are not affected by this error. The conclusions in the original paper remain valid and the values of the S/N for the high-latitude objects we focused on in the paper (mainly Virgo and Coma) are now even stronger.

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Table 1
S/N, Photon Counts, and Backgrounds in *Fermi* Simulations

Object	$b\bar{b}$ Channel				$\mu^+\mu^-$ Channel				Background
	ann	dec	ann	dec	ann	dec	ann	dec	
Coma 1 deg	5.297	(44)	5.297	(44)	1.237	(7)	2.109	(13)	25
Coma 2 deg	5.068	(68)	7.583	(114)	0.818	(9)	2.741	(33)	112
Coma 5 deg	3.245	(85)	10.078	(303)	0.445	(11)	3.245	(85)	601
Virgo 1 deg	5.041	(36)	5.646	(43)	0.000	(0)	1.118	(5)	15
Virgo 2 deg	5.831	(68)	10.025	(147)	1.132	(10)	3.116	(31)	68
Virgo 5 deg	4.185	(102)	15.588	(488)	0.666	(15)	5.068	(126)	492
Perseus 1 deg	0.777	(8)	4.178	(51)	0.298	(3)	1.323	(14)	98
Perseus 2 deg	0.503	(10)	4.042	(88)	0.152	(3)	1.041	(21)	386
Perseus 5 deg	0.271	(14)	3.156	(168)	0.077	(4)	0.807	(42)	2665
GAttractor 1 deg	0.175	(5)	1.741	(51)	0.070	(2)	0.592	(17)	807
GAttractor 2 deg	0.130	(8)	1.654	(103)	0.033	(2)	0.438	(27)	3777
GAttractor 5 deg	0.089	(15)	1.379	(234)	0.024	(4)	0.343	(58)	28572
Filament1, $d = 65 \text{ Mpc } h^{-1}$	0.224	(14)	4.485	(290)	0.112	(7)	1.379	(87)	3891
Filament2, $d = 40 \text{ Mpc } h^{-1}$	0.517	(46)	6.541	(602)	0.135	(12)	1.797	(161)	7869
Filament3, $d = 65 \text{ Mpc } h^{-1}$	0.226	(54)	3.117	(750)	0.079	(19)	0.756	(181)	57127
Filament4, $d = 55 \text{ Mpc } h^{-1}$	0.380	(60)	5.486	(881)	0.120	(19)	1.338	(212)	24904
Supercluster1, $d = 45 \text{ Mpc } h^{-1}$	0.640	(101)	8.915	(1445)	0.177	(28)	2.343	(372)	24829

Notes. The S/N and number of photon counts (in brackets) in the 1–10 GeV energy range for our different DM models. For cluster regions, three different radii are considered (1° , 2° , and 5°). Filaments 1–4 represent elongated regions connected to these clusters which are potentially interesting due to their high S/N. Median distance of halos belonging to these filaments is indicated. Supercluster1 is a collection of massive halos which accidentally lie along the line of sight. Background counts from the Galactic plus extragalactic diffuse in the same regions are also listed. Note that the annihilation to $b\bar{b}$ case is shown for comparison purposes only.

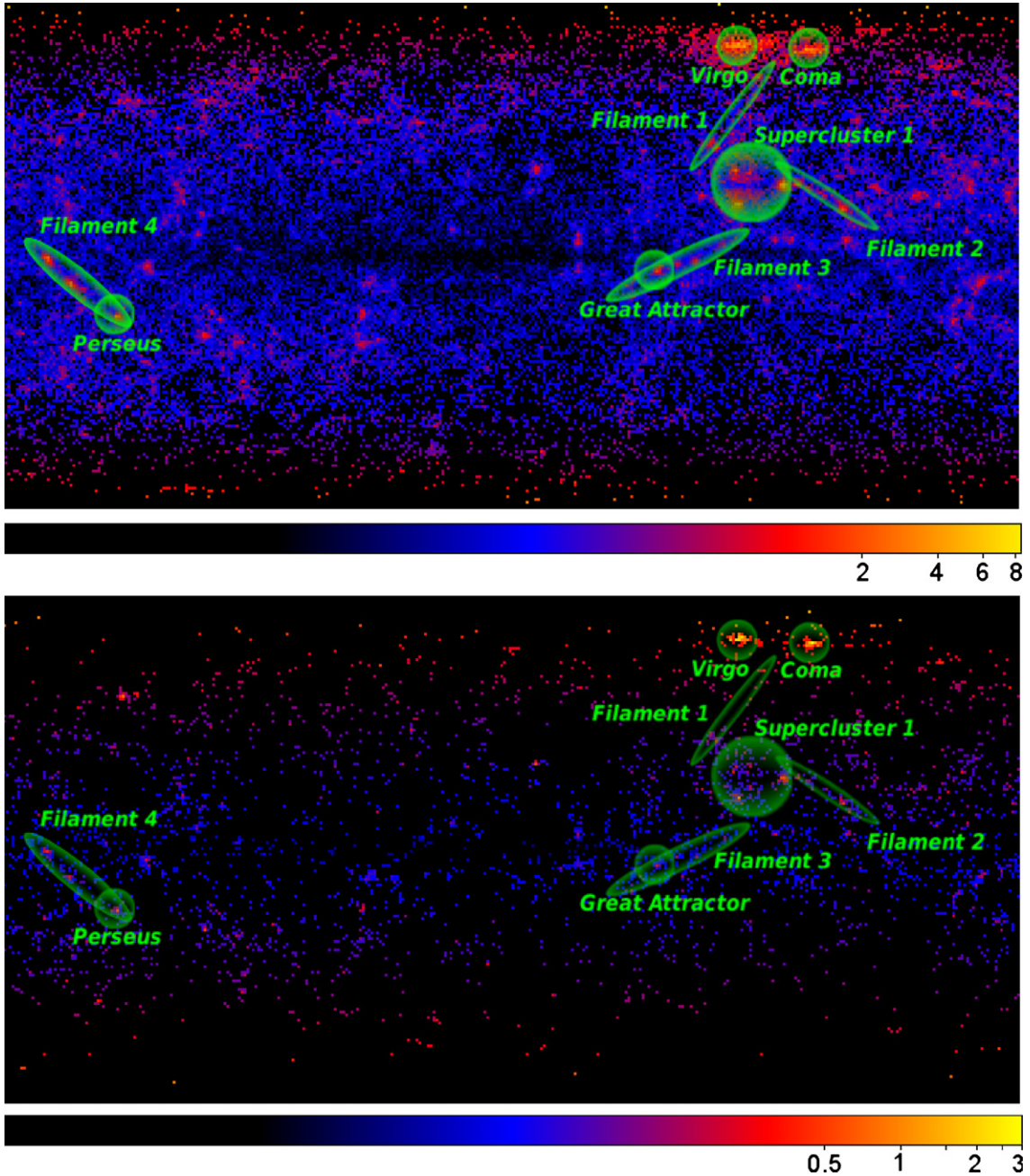


Figure 1. S/N all-sky maps from *Fermi* simulations for DM γ -rays in the energy range 100 MeV–10 GeV built from the Box160CR constrained simulation of the local universe. Results for DM decay (top) and annihilation (bottom) are shown for the $b\bar{b}$ channel model.

(A color version of this figure is available in the online journal.)

The updated FITS files for the dark matter density and density-squared maps are available online at: <http://www.clues-project.org/articles/darkmattermaps.html>.

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REFERENCE

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