

Measuring cosmic bulk flows with Type Ia supernovae from the Nearby Supernova Factory (Corrigendum)

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In Table 1 of Feindt et al. (2013), the p -values for the dipole fit method were calculated incorrectly. While the χ^2 -function was fully minimized for the real data, it was evaluated on an inadequately large grid for the simulated data. As there were no errors in the χ^2 -values of the real data, the best-fit values are unaffected.

The correct p -values are listed in the table below. Since we observed fluctuations in the results between runs using 5000 random realizations, we increased the number of realizations to 250 000. The main conclusions of the paper are not affected by the changed numbers, because the main result of this

method – that there is no evidence for a backside infall behind the Shapley Supercluster – remains the same. The higher p -value in the third redshift bin ($0.045 < z < 0.06$) does not contradict this observation.

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References

Feindt, U., Kerschhaggl, M., Kowalski, M., et al. 2013, *A&A*, 560, A90

Table 1. Reconstructed directions (in Galactic coordinates) and corrected p -values of maximum anisotropy according to a dipole fit in different redshift bins for the Union2 and SNFACTORY datasets and their combination.

Union2			Dipole fit			
N_{SN}	z		l	b	$v_{\text{DF}} [\text{km s}^{-1}]$	p -value
109	0.015–0.035		290(22)	15(18)	292(96)	0.015
16	0.035–0.045		331(59)	–7(37)	496(468)	0.732
17	0.045–0.060		39(45)	–36(28)	870(490)	0.154
23	0.060–0.100		54(93)	–10(53)	509(601)	0.783
55	0.100–0.200		256(90)	–18(34)	1238(1976)	0.388
62	0.200–0.300		14(131)	11(75)	1221(1458)	0.644
62	0.300–0.400		257(84)	–36(27)	2590(2841)	0.349
58	0.400–0.500		161(48)	28(29)	4190(4014)	0.711
44	0.500–0.600		15(100)	–17(33)	3977(4113)	0.715
50	0.600–0.800		343(81)	–50(43)	5576(4279)	0.313
60	0.800–1.400		75(55)	–14(28)	7238(8933)	0.860
SNFACTORY						
20	0.015–0.035		104(95)	26(44)	229(410)	0.896
20	0.035–0.045		286(70)	–7(42)	484(516)	0.861
21	0.045–0.060		330(48)	48(46)	941(390)	0.016
54	0.060–0.100		252(134)	5(75)	232(360)	0.909
Union2+SNFACTORY						
128*	0.015–0.035		298(25)	15(20)	243(88)	0.027
36	0.035–0.045		302(48)	–12(26)	452(314)	0.560
38	0.045–0.060		359(32)	14(27)	650(398)	0.244
77	0.060–0.100		285(234)	–23(112)	105(401)	0.991

Notes. The only change relative to [Feindt et al. \(2013\)](#) is the correction of the p -values for the dipole fit. (*) SN 2005eu (=SNF20051003-004) is included in both datasets. The Union2 measurement was used for the combined datasets.