

CORRIGENDUM TO “GLOBAL HEAT KERNEL ESTIMATES FOR SYMMETRIC JUMP PROCESSES”

ZHEN-QING CHEN, PANKI KIM, AND TAKASHI KUMAGAI

In the statements of Theorem 1.2(2.b) and Theorem 1.4 of [2], the following corrections should be made for the large time estimates:

- (i) page 5025, Eq (1.17) : $|\log \frac{|x-y|}{t}|$ should be $(1 + \log^+ \frac{|x-y|}{t})$ (two places).
- (ii) page 5027, Eq (1.21) : $\log \frac{|x-y|}{t}$ should be $(1 + \log^+ \frac{|x-y|}{t})$ (two places).

Similarly,

- (iii) page 5039, line 13 and page 5040, line 6: $(|x-y| \log(|x-y|/t) \wedge |x-y|^2/t)$ should be $(|x-y|(1 + \log^+ \frac{|x-y|}{t})) \wedge (|x-y|^2/t)$.
- (iv) page 5039, line -4: $(|x-y|(\log \frac{|x-y|}{t})^{(\beta_0-1)/\beta_0} \wedge |x-y|^2/t)$ should be $(|x-y|(1 + \log^+ \frac{|x-y|}{t})^{(\beta_0-1)/\beta_0}) \wedge (|x-y|^2/t)$.

This is because the case $|x-y| \asymp t$ when $\beta \in (1, \infty)$ was not considered in the proof of [2, Theorems 1.2(2.b)]. Once we take this missing case into account, we can easily conclude from [2] that $1 + \log^+ \frac{|x-y|}{t}$ is the correct term. See [1, Proposition 6.7] for a proof of the lower bound estimate on the Dirichlet heat kernel in the upper half-space, which has this corrected term.

For a list of typos and an updated reference in the paper, see

<http://www.math.snu.ac.kr/~pkim/Corrigendum.pdf>

REFERENCES

- [1] Z.-Q. Chen, P. Kim, *Global Dirichlet heat kernel estimates for symmetric Lévy processes in half-space*, arXiv:1504.04673.
- [2] Zhen-Qing Chen, Panki Kim, and Takashi Kumagai, *Global heat kernel estimates for symmetric jump processes*, *Trans. Amer. Math. Soc.* **363** (2011), no. 9, 5021–5055, DOI 10.1090/S0002-9947-2011-05408-5. MR2806700

DEPARTMENT OF MATHEMATICS, UNIVERSITY OF WASHINGTON, SEATTLE, WASHINGTON 98195
E-mail address: zqchen@uw.edu

DEPARTMENT OF MATHEMATICAL SCIENCES AND RESEARCH INSTITUTE OF MATHEMATICS, SEOUL NATIONAL UNIVERSITY, BUILDING 27, 1 GWANAK-RO, GWANAK-GU SEOUL 151-747, REPUBLIC OF KOREA

E-mail address: pkim@snu.ac.kr

RESEARCH INSTITUTE FOR MATHEMATICAL SCIENCES, KYOTO UNIVERSITY, KYOTO 606-8502, JAPAN

E-mail address: kumagai@kurims.kyoto-u.ac.jp

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