

**ERRATUM TO “A COMPLETE PROOF OF THE POINCARÉ AND  
GEOMETRIZATION CONJECTURES – APPLICATION OF THE  
HAMILTON-PERELMAN THEORY OF THE RICCI FLOW”, ASIAN  
J. MATH., VOL. 10, NO. 2, 165–492, 2006\***

HUAL-DONG CAO<sup>†</sup> AND XI-PING ZHU<sup>‡</sup>

We would like to thank Bruce Kleiner and John Lott for bringing to our attention the fact that the argument concerning Claim 2 in the proof of Perelman’s singularity structure theorem (i.e., the Step 2 in the proof of Theorem 7.1.1 in our paper, p. 400–402) essentially appeared in the initial version of their notes on Perelman’s first paper posted on the website

<http://www.math.lsa.umich.edu/research/ricciflow/perelman.html>

in June, 2003. Thanks to this initial version of their notes, this part of Perelman’s argument had been widely understood by the experts in the field since June of 2003.

Looking back, we realize that, sometime during the period between June 2003 and early 2004, we had looked at the initial version of Kleiner-Lott’s notes, and the argument for finite distance implies finite curvature in our own notes back then was based on the argument in their initial notes. More than a year later, we wrote up the Step 2 in the proof of Theorem 7.1.1 in our paper according to our own notes and overlooked the fact that the argument was in fact based on the work of Kleiner-Lott in their initial notes. We apologize for failing to attribute this argument to Kleiner and Lott in our paper due to our oversight.

In the introduction we wrote that “We would like to point out that our proof of the singularity structure theorem (Theorem 7.1.1) is different from that of Perelman in two aspects: (1) we avoid using his crucial estimate in Claim 2 in Section 12.1 of [103]; (2) we give a new approach to extend the limit backward in time to an ancient solution. These differences are due to the difficulties in understanding Perelman’s arguments at these points.” Regarding part (1), we acknowledge here that our treatment, with some modifications, follows the June 2003 version of the notes of Kleiner and Lott.

---

\*First submitted on September 1, 2006; accepted in final form on September 21, 2006.

<sup>†</sup>Department of Mathematics, Lehigh University, Bethlehem, PA 18015, USA (huc2@lehigh.edu).

<sup>‡</sup>Department of Mathematics, Zhongshan University, Guangzhou 510275, P. R. China (stszxp@zsu.edu.cn).

