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**M. A. Alfonseca\***, maria.alfonseca@ndsu.edu, and **J. Kim**. *On convexity and regularity of intersection bodies.*

We will present several results on the strict improvement of regularity and convexity of convex and star bodies of revolution under the application of the intersection body operator. As a corollary, we prove that in sufficiently high dimension, the double intersection body of a convex body is close to the Euclidean ball in the Banach-Mazur distance. (Received August 26, 2013)