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Nat Sothanaphan* (natsathanaphan@gmail.com), 500 Memorial Drive, Cambridge, MA 02139, and **Eilot Bongiovanni, Arjun Kakkar** and **Alejandro Diaz**. *Isoperimetry in Surfaces of Revolution*.

The isoperimetric problem with a density or weighting seeks to enclose prescribed weighted volume with minimum weighted perimeter. According to Chambers' recent proof of the log-convex density conjecture, for many densities on \mathbb{R}^n the answer is a sphere about the origin. We seek to generalize his results to some other spaces of revolution or to two different densities for volume and perimeter. We provide a new approach to proving circles about the origin isoperimetric. (Received September 10, 2017)