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**Artem Pulemotov\*** ([artem@math.uchicago.edu](mailto:artem@math.uchicago.edu)), Department of Mathematics, The University of Chicago, 5734 South University Avenue, Chicago, IL 60637. *Prescribed Ricci curvature on a solid torus.*

We will discuss the prescribed Ricci curvature equation  $\text{Ric}(G) = T$  on a solid torus  $\mathcal{T}$  under natural boundary conditions. The unknown  $G$  here is a Riemannian metric. The letter  $T$  in the right-hand side denotes a (0,2)-tensor on  $\mathcal{T}$ . We will assume  $T$  is nondegenerate (in fact, even a lighter assumption would suffice). Our goal will then be to settle the questions of the existence and the uniqueness of solutions in the class of rotationally symmetric Riemannian metrics on a neighborhood of the boundary of  $\mathcal{T}$ . (Received June 15, 2011)