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**Andrejs E Treibergs\*** ([treiberg@math.utah.edu](mailto:treiberg@math.utah.edu)), Department of Mathematics, University of Utah, 155 S 1400 E, JWB 233, Salt Lake City, UT 84112. *An eigenvalue estimate and a Brownian pursuit capture problem.*

We plan to discuss our joint work with J. Ratzkin. Suppose a number of predators chase a single prey that starts to one side of the predators, all doing independent standard Brownian motion on the line. Griffeath and Bramson proved that the expected capture time would be infinite for three or fewer pursuers, and conjectured that it would be finite for four or more, based on computer simulations. Li and Shao proved this for five or more. Using their method, we prove it for the remaining case of four predators. The argument depends on a sharp lower bound for the first Dirichlet eigenvalue of a spherical domain. (Received December 15, 2006)