1086-43-1453   **Malabika Pramanik*** (`malabika@math.ubc.ca`), 1984 Mathematics Road, Department of Mathematics, University of British Columbia, Vancouver, BC V5B 2E7, Canada, and **Rudra P Sarkar**. *Chaotic dynamics of the heat semigroup in Riemannian symmetric spaces.*

We show that the heat semigroup generated by certain perturbations of the Laplace-Beltrami operator on the Riemannian symmetric spaces of noncompact type is *chaotic* on their L^p-spaces when $2 < p < \infty$. Both the range of p and the range of chaos-inducing perturbation are sharp. This extends a result of Ji and Weber where it was shown that under identical conditions the heat operator is *subspace-chaotic* on these spaces. (Received September 22, 2012)