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**Jeffrey F. Brock\***, Mathematics Department, Brown University, Box 1917, Providence, RI 02912, and **Howard A. Masur** and **Yair N. Minsky**. *Asymptotics of Weil-Petersson geodesics: ending laminations, recurrence and flows.*

We define an ending lamination for a Weil-Petersson geodesic ray. Despite the lack of a natural visual boundary for the Weil-Petersson metric, these ending laminations provide an effective boundary theory that encodes its asymptotic CAT(0) geometry. In particular, we prove an *ending lamination theorem* for rays that recur to the thick part, and we show that the ending lamination embeds the recurrent rays into the Gromov-boundary of the curve complex. As an application, we establish fundamentals of the topological dynamics of the Weil-Petersson geodesic flow, showing density of closed orbits and topological transitivity. (Received January 22, 2008)