1070-30-259 **Mark David Comerford*** (mcomerford@math.uri.edu), 5 Lippitt Road, Room 200, Kingston, RI 02881. *Meridians and the Carathéodory Topology.*

We examine the following problem: given a hyperbolic domain $U \subset \overline{\mathbb{C}}$ and two disjoint closed sets E, F each containing at least two points such that $\overline{\mathbb{C}} \setminus U = E \cup F$, is there a shortest simple closed hyperbolic geodesic in U which separates these two sets? The answer to this question is yes, and such geodesics are known as meridians of the domain U. These curves are important for understanding the convergence of sequences of pointed domains with respect to the Carathéodory topology. We present some continuity results concerning convergence of meridians for convergent sequences of pointed domains. Using this we can give a boundedness criterion for a family of pointed domains of the same connectivity and none of whose complementary components is a point, such that any limit of a convergent sequence in such a family is another domain of the same type. (Received February 14, 2011)