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A REMARK ON UNIQUENESS OF BEST RATIONAL APPROXIMANTS OF DEGREE 1 IN L^2 OF THE CIRCLE*

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Dedicated to Ed Saff on the occasion of his 60th birthday

Abstract. We derive a criterion for uniqueness of a critical point in H^2 rational approximation of degree 1. Although narrowly restricted in scope because it deals with degree 1 only, this criterion is interesting because it addresses a large class of functions. The method elaborates on the topological approach in [L. Baratchart and F. Wielonsky, *Rational approximation in the real Hardy space H^2 and Stieltjes integrals: a uniqueness theorem*, Constr. Approx., 9 (1993), pp. 1–21] and [L. Baratchart et al., *A criterion for uniqueness of a critical points in H^2 rational approximation*, Canad. J. Math., 47 (1995), pp. 1121–1147].

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