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Stephen Edward Winburn* (stephenedwardwinburn@gmail.com), 289 Kennington Dr., Athens, GA 30606. Lipschitz Bounds for Rational Functions De fined over the Berkovick Projective Line over an Algebraically Closed and Complete Non-Archimedean Field. Preliminary report.

We look at the Lipschitz bound of a rational function on $\mathbb{P}^1_{\text{Berk},K}$, where K is algebraically closed, complete non-Archimedean field. While exploring this topic we consider the consequences of our choice of metric and suggest alternative metrics. We also provide quantitative values for the Lipschitz bound for fractional linear transformations and polynomials of degree less than or equal to three. (Received September 21, 2010)