

1135-11-1973

Paul Fili* (paul.fili@okstate.edu) and **Lukas Pottmeyer**. *Height bounds under splitting conditions.*

In earlier work, Fili and Petsche used potential theoretic techniques to establish a lower bound for the height of algebraic numbers that satisfy splitting conditions, such as being totally real or p -adic, improving on earlier work of Bombieri and Zannier in the totally p -adic case. These bounds applied as the degree of the algebraic number over the rationals tended towards infinity. We discuss how one can make the dependence on the degree of the algebraic number explicit. In particular, we demonstrate lower bounds on the energy of an open neighborhood of the real line in the complex plane. (Received September 25, 2017)