1077-34-1262   **Robert J. Buckingham*** (`buckinrt@uc.edu`), Department of Mathematical Sciences, University of Cincinnati, Cincinnati, OH 45221, and **Peter D. Miller**. *Asymptotics of rational Painleve II solutions.*

The nonhomogenous Painleve II equation has exactly one rational solution for specific values of the nonhomogenous term α. Clarkson and Mansfield observed that the zeros (or poles) of these rational solutions appear to have a highly regular triangular structure. We prove that, in the large-α limit, the scaled zeros (or poles) fill out a certain curvilinear triangular region in the complex plane. We also discuss progress on computing the leading-order asymptotic behavior of the rational solutions inside, outside, and at the edge of this root region. (Received September 22, 2011)