1003-33-757 **Mourad E. H. Ismail*** (`ismail@math.ucf.edu`), Department of Mathematics, University of Central Florida, Orlando, FL 32816. *Complete Asymptotic Expansions for q-Polynomials.* Preliminary report.

We derive large degree complete asymptotic expansions of Plancherel-Rotach type for several families of q-orthogonal polynomials. The terms in these asymptotic developments involve the q-Airy function and its dilations. This q-Airy function was introduced and extensively studied by Ramanujan. (Received September 29, 2004)