1135-32-519 **Mourad E.H. Ismail***, Department of Mathematics, University of, Central Florida, Orlando, FL 32816, and **Chun-Kong Law**, Department of Applied Mathematics, National Sun Yat-sen University, Kaohsiung, Taiwan. *Towards a turning point theory for q-orthogonal polynomials.* Preliminary report.

We develop an intuitive approach to the Plancherel-Rotach asymptotics around the largest zero of a polynomial satisfying a linear functional equation. We first treat the toy problem of Hermite polynomials in order to explain the process by which we determine the correct Plancherel-Rotach asymptotics. We then treat the Stieltjes-Wigert polynomials, q-Laguerre polynomials and the Al-Salam-CHihara polynomials. Our approach does not use any refined properties of the orthogonal polynomials we treat but we only uses the second operator operator whether it is differential, difference, q-difference, or involves the Askey–Wilson operator. (Received September 06, 2017)