Jason P. Bell* (jpb@math.sfu.ca), Simon Fraser University, Department of Mathematics, 8888 University Drive, Burnaby, B.C. V5A 1S6, Canada. Laplace transforms and zero-one laws. Preliminary report.

We modify Compton's approach to obtaining zero-one laws for various combinatorial structures using Laplace transforms. This new approach allows us to obtain zero-one laws that are much stronger and much more general than those obtained so far by this approach; in particular, this approach unifies much of the existing theory for power series and for Dirichlet series. We also give some applications of this work. (Received September 03, 2008)