The Range of a Potential RONAL MICKENS, Clark Atlanta University — Most, nonrelativistic potentials have a characteristic range, i.e., the distance beyond which the interaction is effectively zero. An essential issue is: Given a potential energy function, V(r), how can its range be determined? An important prior question is whether the "range of a potential" makes physical sense? An earlier consideration of these matters, [1], provided partial answers to these questions [1]. The main purposes of this presentation are (i) reanalyze the notion of "range of a potential" as defined by Mickens [1], (ii) determine the range of all the standard potentials occurring in atomic, nuclear, and particle physics, and (iii) place restrictions on potential energy functions, having a finite range, at both short and asymptotical large distances. Reference: [1] R.E. Mickens, Long-range interactions, Foundations of Physics, Vol. 9 (1979), 261-269.

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