

Abstract Submitted
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The Role of Mass in the Carrier-Envelope Phase Effect for H_2^+ Dissociation¹ JIANJUN HUA, BRETT ESRY, J.R. Macdonald Laboratory, Department of Physics, Kansas State University — The carrier-envelope phase (CEP) dependence of the dissociation of H_2^+ is studied with special emphasis on the role of the nuclear mass. We find that the total dissociation probability displays a CEP effect that grows with increasing mass while the difference between dissociating to $p+H$ and $H+p$ displays an effect that shrinks. Insight into the physical processes involved is given by an analytic description that casts CEP effects as interferences between pathways requiring different numbers of photons.

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