

Abstract Submitted  
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**Thick and thin slices of photoproducts: correlated state distributions in ketene dissociation**<sup>1</sup> GREGORY HALL, Brookhaven National Laboratory, ANATOLY KOMISSAROV, JPL, MIKE MINITTI, Stony Brook University, ARTHUR SUITS, Wayne State University — We have revisited the correlated product distribution of  $\text{CH}_2 + \text{CO}$  in the photodissociation of ketene at an energy  $2350 \text{ cm}^{-1}$  above the barrierless singlet dissociation threshold. Using time-sliced ion imaging, we find the speed distribution of state-selected CO fragments to be quite different from previous measurements. For each CO rotational state observed, the deviations of the coincident  $\text{CH}_2$  distribution from a statistical Phase Space Theory can be accurately described with a single parameter in the spirit of a linear surprisal. The distributions are consistent with calculations of exit channel rotational dynamics starting at a variational transition state.

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