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**Passage time statistics in the formation of ultracold dimers from fermionic atoms** HERMANN UYS, TAKAHIKO MIYAKAWA, DOMINIC MEISER, PIERRE MEYSTRE, University of Arizona — We investigate the temporal fluctuations characteristic of the formation of molecular dimers from ultracold fermionic atoms via either photoassociation or a Feshbach resonance. The quantum fluctuations inherent to the initial atomic state result in large fluctuations in the passage time from atoms to molecules. A heuristic classical stochastic model yields an excellent agreement with the full quantum treatment in the initial stages of the dynamics. We also show that in contrast to the association of atoms into dimers, the reverse process of dissociation from a condensate of bosonic dimers exhibits little passage time fluctuations.

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