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Influence of Monomer Shape on Aggregates JONATHAN PERRY, KEVIN BOMBARDIER, LORIN MATTHEWS, TRUELL HYDE, CASPER - Baylor University — Agglomeration of dust particles is the initial step in protoplanetary formation, with the precursors to planetesimals believed to form through the collisions of micron and submicron sized dust particles. Grains immersed in a plasma environment, as found in the neighborhood of a protostar, acquire a charge on their surface. The distribution of this charge on the surfaces of the particles impacts the morphology of the aggregates formed during collisions, which in turn influences the evolution of the dust cloud within the plasma. Recently, it has been shown that the shape of the individual dust grains can lead to widely varying morphologies of aggregate structures during collisions. This study seeks to extend this work by examining the morphologies of aggregates employing various monomer shapes as precursors and grown under generic astrophysical plasma parameters.

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