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Towards Control of Ultracold Collisions Using Frequency-Chirped Laser Light TANNER GROGAN, MATTHEW WRIGHT, Adelphi University — We are developing an apparatus for controlling inelastic collisions of ultracold atoms using frequency-chirped laser light. Recent experiments with collisions and photoassociation have shown that it is possible to control ultracold light-assisted collisions with frequency-chirped laser light. We have developed an intense frequency-chirp laser system that allows us to achieve controllable chirp rates of 0.5 GHz/ns. We will discuss our progress on developing the magneto-optic trap used for producing ultracold atoms and measuring the inelastic collision rate.

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