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New Heavily Embedded Protostellar Outflows in the NGC 1333 Cloud AMANDA BROADMEADOW, DAN WATSON, University of Rochester — NGC 1333 is a prime example of a star-forming region in the early stages of star formation, when the young stellar objects are still accreting material and producing outflows. NGC 1333 has numerous protostars and thus many prominent outflows, notably HH 7-11. This has led NGC 1333 to be one of the most well-studied star-forming regions. The outflows that these forming stars produce are visible in the near-infrared and infrared wavelengths. Recent Hubble Space Telescope observations have revealed two new outflows in the southern region of NGC 1333, which are the subject of this project. Using Hubble and Spitzer Space Telescope data, along with simulations from the MAPPINGS V code, the physical conditions of the outflows can be found. The extinction values for each knot in the outflows give an understanding of the spatial distribution of these two outflows within the cloud. The simulation data can give us the velocity of the shock and the preshock density. These conditions can then be used to understand the rates of mass, momentum, and energy that are lost by the protostar and injected into the surrounding cloud. In this presentation, I will discuss recent results for these newly discovered outflows and conclusions that can be drawn about impacts on the cloud.

Amanda Broadmeadow
University of Rochester

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