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Supernova-driven Superbubbles: Turbulence or Outflows from Clustered Feedback in Galaxies MATTHEW ORR, Rutgers University/Flatiron Institute, DRUMMOND FIELDING, CHRISTOPHER HAYWARD, Flatiron Institute, BLAKESLEY BURKHART, Rutgers University/Flatiron Institute — In this talk, I will compare an analytic model for supernova-driven superbubbles with observations of local and high-redshift star-forming galaxies. Beginning with a summary of the theoretic model, this talk will span a discussion of clustered supernova feedback itself to its consequences in galaxies. Our model correctly predicts the presence of superwinds in local galaxies and the ubiquity of outflows near $z \sim 2$. We find that high-redshift galaxies may ‘capture’ a large fraction of their feedback momentum in the dense interstellar medium (ISM), driving supersonic turbulence in the dense gas directly, whereas local galaxies may contain 10% of their feedback momentum from the central starburst. I will discuss our prediction that most superbubbles stall and fragment *within* the ISM, and that this occurs at or near the scale height of gas in galaxies. Lastly, I will compare our predicted bubble properties with observed HI bubbles/holes in local galaxies.

Matthew Orr
Rutgers University

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