

ASTROPHYSICS SEMINAR SERIES



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Tuesday, October 29 12:30 pm - Rm 184 NSH

Suppressed Superwinds: A New Paradigm for Extreme Massive-Star Feedback

Feedback from young, super star clusters (SSCs) is a major driver for galaxy evolution at all cosmic epochs, but may be especially relevant for cosmic reionization. The standard scenario for massive-star feedback has been that superwinds from SSCs clear pathways for Lyman continuum (LyC) and Ly-alpha radiation to escape from host galaxies. However, theoretical predictions indicate that for the most massive and compact SSCs, superwinds are actually suppressed by catastrophic cooling and pressure confinement. These extreme conditions are rare, but observational evidence from local starbursts increasingly supports this scenario. I will present our work in establishing this new paradigm and its consequences for LyC and Ly-alpha escape.



PHYSICS