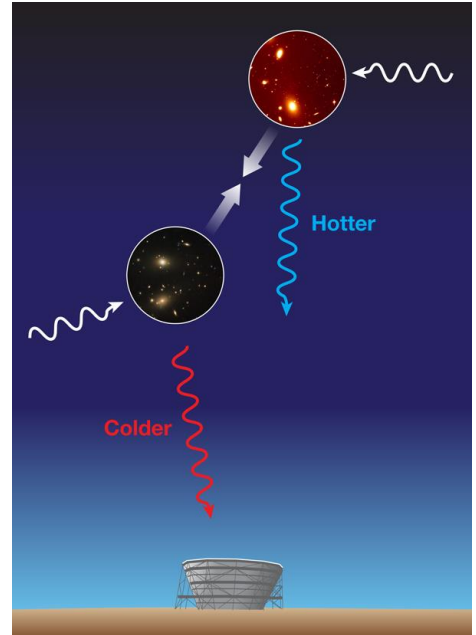


Journal Club

Nicholas Battaglia
Princeton

Constraining fundamental physics and halo energetics using Sunyaev-Zel'dovich measurements



The recent detections of the kinetic Sunyaev-Zel'dovich (SZ) from galaxy groups and clusters have ushered in an exciting new era of millimeter astronomy. These measurements and future ones provide new windows into the thermodynamic properties of the intracluster medium and have the potential to constrain fundamental physics. I will show how we can constrain the important baryonic process that govern galaxy formation through the combination of thermal and kinetic SZ measurements. Additionally, I will show potential of kinetic SZ measurements to constrain fundamental physics and how to mitigate the modeling uncertainties associated with the baryonic processes that will limit future constraints.

image credit: APS/Alan Stonebraker: (Top) ESO; (Bottom) ESA/Hubble/NASA]

Friday, Sept. 30, 2016

3pm

301 Physical Sciences Bldg.