

TUESDAY

MARCH 1

12:30 P.M.

RM 184 NSH

The Sky Is Falling: Simulations of Cosmic Material Raining Down onto Our Galaxy

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Sensitive observations have found enormous clouds of material beyond our Milky Way Galaxy. Some are as large as mini-galaxies with as much mass as 100 million Suns. Others are shreds that were ripped from nearby galaxies. Additional observations show that several nearby clouds are currently interacting with our own Galaxy. Some have reportedly shot through the Milky Way's disk while others are currently passing through the less dense outskirts of our Galaxy. My group has been computationally modeling these clouds, called high velocity clouds (HVCs), in order to determine how they affect our Galaxy and how our Galaxy affects them. In this presentation, I will show how HVCs behave on timescales of hundreds of millions of years, how they shed streamers of highly ionized gas that become incorporated into our Galaxy, and what happens when they collide with the dense gas in our Galaxy's disk.