LABORATORY FOR ELEMENTARY-PARTICLE PHYSICS (LEPP)

Theory Seminar

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Dissipative Dark Matter and the Growth of Black Holes

For some time now, astrophysical measurements have suggested that at the center of most galaxies lies a Super Massive Black Hole (SMBH) that grows by the accretion of gas from its surrounding environment. As the gas falls into the black hole, a huge amount of radiation is produced, enabling the SMBH to be observed. Some of the observed galaxies were shown to host SMBH as heavy as $10^9, M_\odot$ at time as early as z~5 . Regardless of the detailed understanding of the mass accretion processes, these SMBH seem too heavy to be explained. In this talk I will present the possibility that the excess measured SMBH mass can be explained by the existence of interacting dark matter that allows for dissipation in the hidden sector.

Wednesday, Feb. 14, 2018
2:00pm

401 Physical Sciences Building