Feedback in Galaxy Formation

Join us for a presentation by Dr. Ryan Trainor, Miller Fellow, UC Berkeley Astronomy Department

October 26th, 4-5pm, UH Hilo Sciences & Technology Building, room 108
Come early to meet the speaker with coffee/tea from 3:30-4 and student talk story afterwards from 5-6pm

Abstract:
Galaxies like our Milky Way began their formation as quantum fluctuations during the Big Bang. These fluctuations grew under the force of gravity, forming the first generations of stars. At this point, however, the smooth formation of galaxies was interrupted by the tremendous amounts of energy released by the lives and deaths of stars, a process called galaxy feedback. Feedback remains a difficult astrophysical process to model and observe because of the large range of physical mechanisms involved: supernovae, massive stars, and accreting black holes. However, I will describe how new observations and simulations are helping us understand the interactions of stars and gas in galaxies over cosmic time and solve the puzzle of feedback in galaxy formation.

About the Speaker:
Ryan Trainor is a Postdoctoral Fellow at the Miller Institute for Basic Research in Science at the University of California, Berkeley. A California native, he received his Bachelor’s degree in Physics from UC Irvine and his PhD in Astrophysics from Caltech. In addition to teaching astronomy, he spends most of his time analyzing data from the W. M. Keck Observatory and the Hubble Space Telescope in order to understand the interactions of stars, gas, and black holes in the early Universe.

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Figure caption: A simulation of violent feedback in a forming galaxy. Credit: Phil Hopkins (Caltech)