San Mateo County Astronomical Society

SMCAS General Meeting and Presentation on Friday April 6, 2018

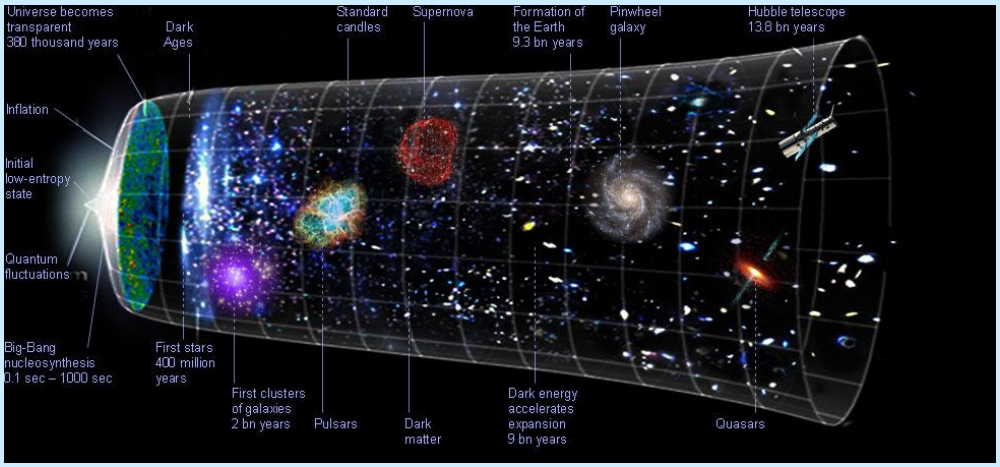
Dr Adrian Liu

Hubble Fellow, Dept of Astronomy, UC Berkeley

Watching Our Universe Grow Up: Radio Snapshots Through Cosmic Time

Friday, April 6, 2018 , College of San Mateo, Building 36
SMCAS General meeting at 7:00 p.m. ISC Room, room 110
Presentation at 8:00 p.m. Planetarium
Free and open to the public, free parking (recommend lots 5 or 6).

How did the first generation of stars and galaxies form in our Universe? Astronomers don't know. We have ideas, to be sure, but they're hard to confirm with observations because prior to the formation of the first stars and galaxies, it's not clear what we can look at! In the last few years, much progress has been made in trying to detect radio waves from hydrogen atoms that existed in the early Universe. The existence of hydrogen precedes the formation of the first stars and galaxies, and therefore allows direct observations of the formation process. This new technique (known as "21cm cosmology") has yet to become a standard tool in the astronomical community. In this talk, Dr Liu will provide a "sneak preview" of what will come in the next few years, as 21cm cosmology revolutionizes our understanding of how our present Universe—with its majestic astronomical patterns consisting of mature stars, galaxies, and even larger objects—came to be.



Dr Liu is a cosmologist working on the boundary between theory and observations in 21 cm cosmology. By using data from a new generation of radio telescopes, He seeks to understand how the first stars and galaxies formed, with the eventual goal of mapping an unprecedentedly large volume of our observable Universe.