Amateur Astronomers, Inc. Main Lecture Series 2020-2021

September 18, 2020

Gravitational Waves: A New View of the Universe

Dr. Amber L. Stuver
Villanova University

Albert Einstein predicted the existence of gravitational waves, ripples in space-time. In 2017, a gravitational wave was detected less than 2 seconds before a gamma-ray burst was detected from the same area on the sky.

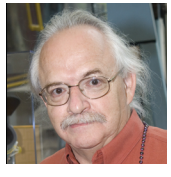
October 16, 2020

A Cosmic Shadow Theatre

Dr. Emmanuel Schaan
Lawrence Berkeley National Laboratory

The afterglow from the big bang, the "cosmic microwave background", acts as a backlight in a shadow theatre where the galaxies of the Universe are the protagonists.

November 20, 2020



In the Grip of the Big Telescope Age

David H. DeVorkin
National Air and Space Museum

George Ellery Hale writing in Harper's Magazine in 1928, he cried out: "Starlight is falling on every square mile of the earth's surface, and the best we can do at present is to gather up and concentrate the rays that strike an area 100-inches in diameter."

December 18, 2020

Colors in the Shadows: Exoplanet Atmospheres

Arjun Savel
UC Berkeley

Some exoplanet atmospheres bear similarities to Earth's, yet others feature blistering temperatures.. With the James Webb Space Telescope on the horizon, we are poised for a transformative shift in our understanding of these worlds.

January 15, 2021

Is Anybody Out There?

Dr. Dan Werthimer
UC Berkeley

What is the possibility of other intelligent life in the universe? Can we detect radio, infrared, or optical signals from other civilizations? Current and future SETI projects may provide an answer.

February 19, 2021

The Many Shadows of Black Holes

Dr. Joseph Neilsen
Villanova University

Black holes are impossible to see directly but not impossible to find: their gravity affects objects around them. The Event Horizon Telescope in 2019 revealed the first image of a black hole, the "shadow" of the supermassive black hole in M87.

March 19, 2021

How Starbursts Shape Dwarf Galaxies

Dr. Grace Telford
Rutgers University

When a galaxy collects enough cold, dense gas in its center, a burst of star formation is begun. As the largest of the stars end their lives as supernova explosions, they can reshape the distribution of gas, stars, and dark matter in the galaxy.

April 16, 2021

How Galaxies Shed Light on Dark Matter

Kate Storey-Fisher
New York University

Galaxies act as cosmic streetlamps, illuminating where the dark matter lies in the universe. By mapping out millions of galaxies, we can learn about the nature of dark matter and the expansion history of the universe.

May 21, 2021

Members' Research Projects

AAI Members

AAI reserves this month's lecture for speakers from among our membership. These members will share their year's research activities, discuss endeavors in astro-imaging, telescope making projects, as well as other astronomical enterprises.

For more information including possible schedule or venue changes please visit www.asterism.org