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Star Parties: Bringing The Infinite Universe Into A Small Classroom

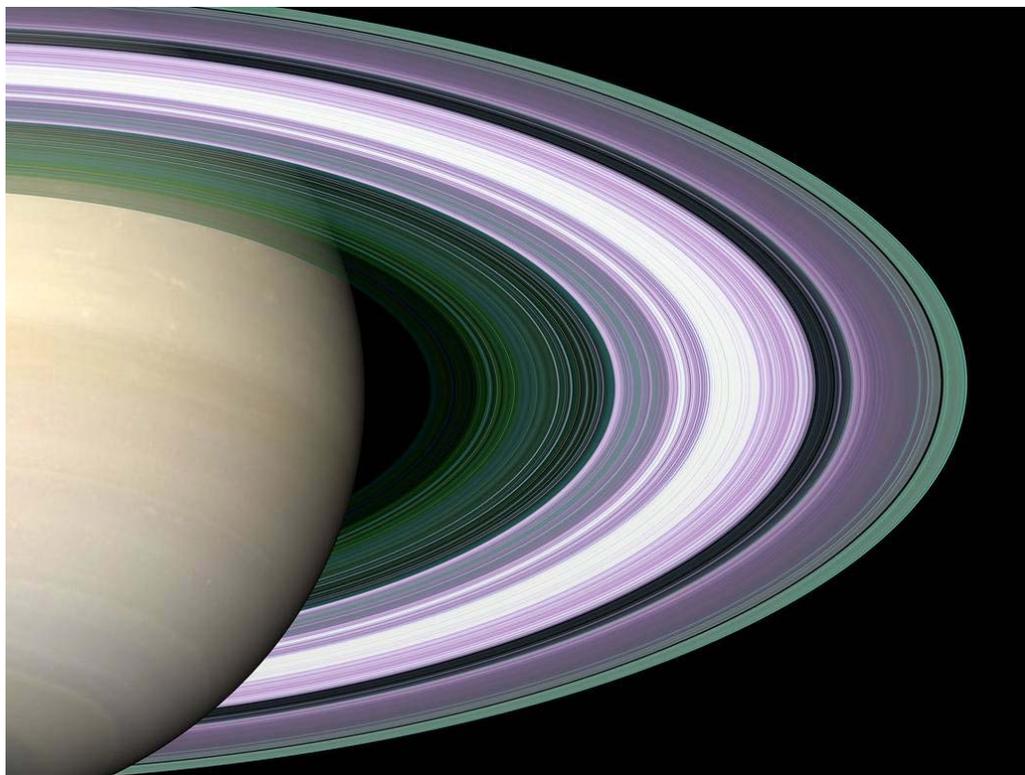
Larry L. Burriss^a

^aMiddle Tennessee State University

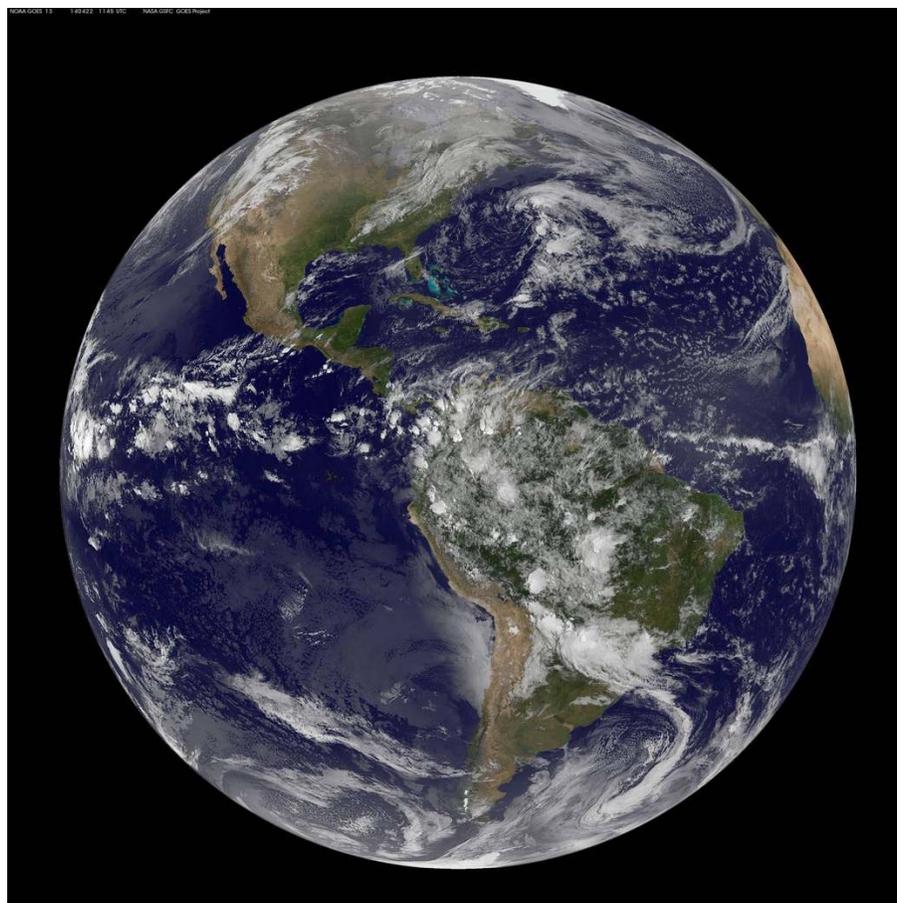
Dr. Larry L. Burriss, B.A., M.A., M.A., Ph.D., J.D., LtCol USAF, is a professor in the College of Media and Entertainment at Middle Tennessee State University. He is a strong advocate for First Amendment freedoms and particularly interested in issues related to media and national security.



Grand Swirls from NASA's Hubble ©NASA



Simulation of Saturn's Rings ©NASA



Satellite View of the Americas on Earth Day ©NASA

Background

As everyone knows, astronomers are nerdy guys who spend all of their evenings looking through telescopes at celestial objects with strange names. Or they sit in front of computer screens staring at circles and ellipses surrounded by high-powered equations and numbers out to ten or more decimal places.

That's the image, unless you show up at one of the monthly first-Friday night star parties hosted by the Middle Tennessee State University department of astronomy and physics.

Here you (yes you, with no math or science since high school) will get to talk with a real astronomer (male or female) about the origins of the universe, how we'll go to Mars, the best way to observe an eclipse (solar and lunar), the possibility of life on other planets, and the reason why most rainbows in movies are all wrong, and why phasers and blasters won't work in space (and will rarely work on earth).

With an audience ranging in age from cub scouts to octogenarians, the event offers families from the community an opportunity to join with University astronomy faculty, students and staff to view and discuss the wonders of the sky.

The star parties have been presented since 1999 when Dr. Eric Klumpe decided to try to bring the entire universe into a campus classroom. Using a combination of PowerPoint and hands-on demonstrations, well-mixed with a helping of often self-deprecating humor, Klumpe is now joined by a number of other astronomers who bring the sky, well, down to earth in easily understood lectures and discussions.

If math is not your strength, there are numerous pictures and words. If you are a bit more math-aware, an equation or two will be provided. If you want to toss out a challenge related to the effect of time and gravity on black holes and the heat death of the entire universe, well, get ready for some equations, words and theories most of us will probably never encounter.

Then, after about 45 minutes of handouts, demonstrations, lectures and discussions, participants can go outside for telescope time at the Middle Tennessee State University Observatory. Many amateur astronomers bring their own telescopes and share the viewing experience, and the University telescope has a camera that feeds the images to 61-inch flat panel plasma displays mounted on two outside walls of the observatory.

Topics

"Funky Fizix in Film" is a popular theme Dr. Klumpe has used for years. He explores how physics and astronomy are used in the plot of popular films. Unfortunately, he usually has to conclude that the Hollywood portrayal of physics and science are grossly inaccurate (fun, but wrong).

Recently, themes dealt with Cassini's Grand Finale at Saturn. From Black Hole Trivia to Exotic Matter, professors use technology to draw the audience into the universe as our neighborhood. Participants have the opportunity to listen to the sounds of Jupiter, be amazed at the rings of Saturn, and consider the journeys of the Mars rovers.

What is most exciting about this time shared together is the willingness of Star Party participants to suspend their current understandings of space and time and consider the possibility of the future tomorrows.

For more information, please see:

https://www.mtsu.edu/observatory/star_parties.php

<https://www.usatoday.com/story/news/local/schools/mtsu/2017/05/03/mtsu-solar-eclipse-may-star-party/101215482/>