Dark energy is out there, and it won't be stopped

By David L. DeBruyn
dbruyn@mlive.com

Deep Physics

What: Physics lecture for the general public
Who: Dragan Huterer, associate professor of physics at the University of Michigan
Topic: "Dark Energy and the Accelerating Universe"
When: 7 p.m. Thursday
Where: Studebaker Books and Music, 2600 28th St. S.E., Grand Rapids
Admission: Free
Sponsor: Grand Rapids Amateur Astronomical Association and Grand Rapids Public Museum

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Dragan Huterer creates excitement about his research. After all, he and colleagues at the University of Michigan are investigating one of the most significant of nature's mysteries: What is the source of "dark energy," that could make up more than two-thirds of the universe?

Since introduction of the concept in 1998, observations and scientific thinking have converged to support its existence. Huterer and teams of physicists and graduate students from UM and other universities use images of distant galaxies and exploding stars (supernovae) to measure acceleration of the universe, using the Hubble Space Telescope and ground-based instruments to formulate theories about dark energy. These theories could help explain why the universe is accelerating, essentially growing larger at an ever-faster rate.

Deep Physics

Quite a Story

Huterer brings the fascinating story of the accelerating universe, and the dark energy that could propel it, to Grand Rapids this week during a public presentation Thursday evening.

A native of what then was Yugoslavia — and a self-professed physics geek since his high school

West Michigan native Jacob Bourjaily, himself a young physicist at the Niels Bohr Institute in Copenhagen, said that by what he terms "almost absurd coincidence," he kept pulling into Huterer at science conferences throughout the world. Because of shared scientific interests, they kept in touch.

In a recent email, Bourjaily spoke highly of his fellow scientists and friends.

"He is extremely well respected, and a world-renowned authority on the investigation of dark energy and its influences on our visible universe," Bourjaily said. "And, he is exceptionally talented at communicating this exciting area of research to the public."

Huterer said while results from a wide variety of experiments have converged to support its existence, dark energy remains "one of the foremost mysteries of modern physics."

"We are looking for any departure from the prevailing model of what it is," he said: "If we see a departure, we will have further information about the nature of dark energy."

I suspect Huterer will continue to be an important member of a team seeking just that, and I am looking forward to his upcoming Grand Rapids presentation.

— David L. DeBruyn is curator-emeritus of the Roger B. Crosier Planetarium at the Grand Rapids Public Museum.