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## Meteor shower sparks interest in stargazing

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It's a long way from here to the Andromeda galaxy — and the only thing tougher than getting there is explaining the unexplainable to a child.

But George Seagle of Springfield can put it to kids in terms they can understand.

"Well, you'd have to travel at 186,000 miles per second for 2.2 million years without a break," he says. "You can't stop and get a Coke — nothing. There's no, 'Mom, I have to go to the bathroom.'"

Running off to relay this new information to a family member, one boy keeps repeating the speed of light "186,000 miles per second" to himself so he doesn't forget.

Seagle was one of a half-dozen members of the Sangamon Astronomical Society who had telescopes set up Tuesday night on the shores of Thompson Lake at The Nature Conservancy's Emiquon Preserve. They were joined by University of Illinois Springfield physics and astronomy professor John Martin.

One telescope was trained on the fuzzy shape of the [Andromeda galaxy](#). Others were fixed on clusters of stars.

The backdrop was the Perseid Meteor Shower, predicted to peak mid-week. But the meteor shower was just the entree society members needed to get people interested in the wonders and mysteries of the night sky.

About 65 people leaned back in lawn chairs to scan the darkening sky for meteors or "shooting stars."

"Part of the group's mission is public outreach," says the society's president, Ray Watt of Springfield. "There is a lot of interest in astronomy. People just get mesmerized by it."

Martin strolled around amid the lawn chairs scattered just a few yards from Thompson Lake, explaining the meteor shower and adding bits of information about the night sky — pointing out constellations and telling stories.

Every so often he was interrupted by the "oohs and ahs" of the crowd when a streaking meteor was spotted.

The tiny particles — left over from a passing comet — are small. Martin says a meteorite of iron the size of a man's fist likely would survive to reach the ground, but most were much smaller. Icy pieces of a comet had "no chance" of surviving their blazing trip through the atmosphere.

And that leads to another interesting tidbit. The heat of re-entry into the atmosphere is not caused by friction, but rather by ram pressure. Air molecules ahead of the speeding meteorite can't get out of the way fast enough. So pressure — and therefore heat — builds up in front.

The example often given is how a bicycle pump warms up as air is vigorously pumped into the tire. In the atmosphere, compressed air heats up the meteorite as it passes it.

Martin also talks about the shape of the [Milky Way galaxy](#) — a tough subject to look at when one is sitting in a lawn chair smack in the middle of one of the spiral arms.

"It's a pancake or Frisbee-shaped group of stars," he says of the galaxy's general shape. As darkness descended, he pointed out the creamy band that gives the Milky Way its name.

"Hundreds of millions of billions of stars that are too faint to make out with the naked eye blend together in this band of light across the sky," he says.

Participants were able to see how light — even the rising moon — could hinder viewing. Even before moonrise, one became acutely aware of a pair of distant power plants and even each set of headlights passing by on Illinois 78/97.

"In no way will you experience the night sky the way the Native Americans did," Martin says.

He says astronomers have drawn attention to the brightening night sky by connecting the glow on the horizon with the need for greater energy conservation.

Another question asked of Martin was how astronomers were able to predict the meteor shower "peaks."

"It's more of a black art than a science," he says with a laugh. He recalled how comet Khoutek in the 1970s was predicted to be spectacular but turned out to be a dud.

"It gave comets a bad name for decades," Martin says, "until Hale-Bopp and Hyakutake (in the mid-1990s) revived it."

Still, some have gone out on a limb to predict the meteor shower could peak at 200 per minute.

"Astronomers and scientists don't know everything yet," he says.

But people can still learn more by attending a star-gazing event this fall.

The [Sangamon Astronomical Society](#) is hosting the annual Illinois Dark Skies Star Party Oct. 15-18 at the Jim Edgar Panther Creek State Fish and Wildlife Area near Chandlerville.

The [University of Illinois at Springfield](#) will host Friday-night star parties from 8-10 p.m. on eight Friday nights starting Sept. 11.

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