

PROFESSORS SHARE EARTHSHAKING NEWS

By Linda Girardi
FOR THE BEACON-NEWS

AURORA — While some were feeling shell-shocked after waking up to Saturday's snow-swept skies on the first day of spring, experts were talking about everything earthquake.

"An earthquake hit Cuba 22 minutes ago," said Associate Professor David Voorhees of Waubensee Community College, receiving an alert from his iPhone.

Voorhees and Dr. Skip Nelson of Illinois State University were guest speakers at a seminar hosted by the Midwest Institute of Geosciences and Engineering.

The not-for-profit organization's executive director, Steven Baumann, founded MIGE last year to raise awareness about what happens just below the Earth's crust.

Although earthquakes are rare in northern Illinois, the earth sciences and geology professors are

not surprised when one does rattle these parts, like the 10-second earthquake with an epicenter one mile south-southeast of Pingree Grove that had a magnitude of 3.8 on Feb. 10.

"We always expect an earthquake, but you're always surprised when it happens because we don't have the science and technology to predict an earthquake accurately," Voorhees said.

With earthquakes happening every 30 seconds, sophisticated instruments located around the world do detect and measure earthquakes during and after they happen.

"There are thousands of seismometers all around the world, so that when they do happen, we'll get data to analyze and try to understand them. As trained geologists, we knew there was a potential for an earthquake in Haiti, but we didn't know when it would occur," Voorhees said.

So what did they learn

about the 3:59 a.m. Feb. 10 earthquake closer to home?

"We learned that there are still surprises the Earth can throw at us," Voorhees said.

The best explanation for the Aurora-area earthquake is the 20,000-year-old glacier called the Laurentide Ice Sheet and Lake Michigan Lobe.

"When the weight is lifted, the Earth's crust rebounds," Voorhees said.

If someone does invent an earthquake detector, "they would have to create a Nobel Prize for geology," Voorhees said. An earthquake predictor would happen only after decades of successful predictions. "That's the level of scientific scrutiny it would require," the professors said.

The professors are hopeful about the prospects of EarthScope, a \$200 million federally funded science program initiated in 2003 that will arrive in the central part of the United States in 2011.

"It's the big science that's coming to Illinois," Nelson said.

Nelson said the project has already begun to build and upgrade facilities, including 400 transportable seismic stations, high-quality broadband seismographs placed in temporary sites across the U.S. from west to east and Alaska in a regular grid pattern.

"We are going to get 30 of them in Illinois located in 75-kilometer spacing," Nelson said. The seismic stations will be installed 20-feet below the Earth's surface and record data for three years. They may provide the first step in predicting earthquakes.

Nelson said EarthScope has developed new classifications of events below the Earth's surface.

"We didn't know low-frequency earthquakes existed," he said.

"I liken this to what the Hubble Telescope did for astronomy. It is opening up new areas of understanding — it's just incredible," the Illinois State University professor said.

Information about the National Science Foundation program is available at www.earthscope.org.

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