

Searching for Earthquake Information at SMC

By Jennifer Wake

When the 4.2 magnitude quake hit Lafayette on March 1, delicate instruments began to hum 500 feet below the Earth's surface at Saint Mary's College. Within seconds, seismic data was being transferred from the machinery at Saint Mary's to the USGS at Stanford and the Berkeley Seismology Laboratory.

"When the Lafayette quake happened, people rushed down [to the seismograph station in Galileo Hall] to see what the seismic traces on that one looked like," said Saint Mary's physics and astronomy professor Ron Olowin, Ph.D. "There was a lot of interest on campus for that."

As part of a geophysical network established by the Berkeley Seismology Lab, a borehole was drilled in the corner of the Moore Hall parking lot at Saint Mary's last summer. The borehole contains accelerometers as well as a satellite-based global positioning system which measures the size, location, direction and magnitude of an earthquake. The instruments measure seismic activity three-dimensionally – transversely, horizontally and vertically – along the Hayward Fault and around the local area.

From an EarthWatch Station located in a wall case in Galileo Hall, the public can learn about the current atmospheric, subterranean and seismic activity from data collected around campus. In addition to the wall case, the entire EarthWatch system includes a weather station, which feeds data to the NBC-KNTV website (<http://ggweather.com/kntv.htm>), an astronomy platform and observatory behind the cross on the hill, a command center in Galileo Hall where students can remotely access the observatory for their astronomy studies, and now the seismic borehole.

"I discovered that UC Berkeley had a seismology lab, and they were interested in surveying the region in a consortium of observation posts that would look at the surrounding area and its activity, in particular the Hayward fault," said Olowin. "They developed a scheme to monitor delicate instruments all around the Bay Area in a large number of seismic instruments dedicated to the cause."

As the scheme developed, Berkeley became more interested in looking at more data from the Lamorinda area and proposed drilling the deep borehole on the Moraga campus.

But will the information gleaned from this seismic monitoring help to predict earthquakes in the future?

Interestingly, Olowin says that if it does, the college would more likely want to look at the ethics of predictability first.

"If you had a seismic warning, we're not prepared for that type of information. Warning could cause panic and studies are going on now to see how we should respond to that information," he said. "How should we respond if there was an event in the Los Angeles basin? Would you stop traffic on highways? Would you start up your generators? Would you alert your hospitals and service personnel? Do you have a higher risk of people fleeing out of buildings? We don't know how we'd behave. We bring all of these issues into the discussion."



The astronomy observatory located on the hill behind campus

Photos by Jennifer Wake

For now, Olowin is simply interested in what our planet does.

A long-time Lafayette resident who regularly speaks at local service clubs and often brings his telescope to different events to study the moon and stars, Olowin is continually looking for ways to bring data into the community. In addition to the seismic data, weather station and observatory, Olowin hopes to add a solar telescope to the infrastructure, one which can be accessed remotely.

He plans for the telescope to be used by visitors to the new Lafayette Library Learning Center, which will be part of the Glenn Seaborg Learning Consortium scheduled to open spring 2009.

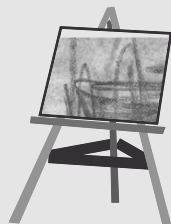
"We're really eager to work with them," he said.



Physics and Astronomy Professor Ron Olowin

Summer 2007 Youth Art Classes Hearst Art Gallery, Saint Mary's College

June 25 – 29, 1 p.m. – 4 p.m.



PRINTMAKING:

Gel, Foamboard, Monoprinting & Silkscreen

Workshop fee: \$110; Materials fee: \$ 95

July 9 – 13, 1 p.m. – 4 p.m.

DRAWING & PAINTING:

Still Life, Landscape & Portraiture



Workshop fee: \$110; Materials Fee: \$80

Both courses are team-taught by returning Hearst summer arts program instructors and OUSD art teachers, Hillery Patterson and Susan Zib.

Each workshop is limited to 15 students; recommended ages are 9 - 14.

FAMILY DAY: PAPER ARTS WORKSHOP

Sunday, April 15, Noon - 3 p.m.

Soda Activity Center



On view in the Gallery through April 29 -
"Paper Cuts: The Art of Contemporary Paper"
"William Keith: The 1870s Paintings"

Hours: Wednesday – Sunday, 11 a.m. – 4:30 p.m.

Telephone: 631-4379

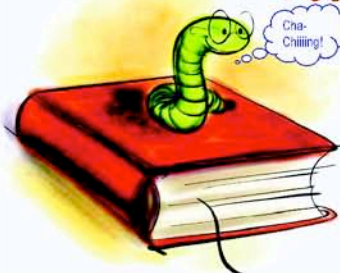
Web site: <http://gallery.stmarys-ca.edu>

Accredited by the American Association of Museums



- Free Boxes !
- Access Hours 7 a.m. to 7 p.m.
- Complete Moving & Packing Supplies
- Major Credit Cards Accepted
- State of the Art Video Surveillance
- All Doors Alarmed
- Individualized Elevator Access

\$tudent \$avings\$!



CENTRAL SELF STORAGE

3333 Mt. Diablo Blvd., Lafayette

(925) 962-1940

Please Call for Details

100% Satisfaction Guaranteed!