

we were led in the field by both Haakon Fossen (University of Bergen) and Haakon Austrheim (Geology Museum, Oslo).

The structure laboratory is finally over the major remodeling efforts and it seems that there are enough people around talking about structural geology and tectonics that the first floor is just exciting to be around. This is in no small part due to the structural geology graduate students. Three new students started in fall 2000: **Scott Giorgis**, **Eric Horsman**, and **Sarah Titus**. Sarah was awarded a graduate student fellowship from the National Science Foundation. In addition, two new postdoctoral fellows will be joining the structural geology group in 2001. **Eric Ferre**, who has worked extensively with the anisotropy of magnetic susceptibility technique, is arriving from France via South Africa. **Sarah Tindall** has also decided to come to Madison after a one year teaching job in Middlebury College. She has worked on block uplifts on the Colorado plateau, and will continue with field research and physical modeling while at the University of Wisconsin.

On a complete aside, the isolation ward is actually becoming THE place to be, at least on Wednesday mornings. All the people stuck here get together for the donuts at this time, with our loose adage coined by ex-isolationist Ron Schott, "Join us for a donut moment in splendid isolation."

#### ❖ John W. Valley

In January 2000, Andrée, and David and I packed a trailer and left Madison two days ahead of a snowstorm for a six-month sabbatical. I was the guest at Caltech of Prof. **John Eiler** (PhD 1994) and **Nami Kitchen** (MS 1995) working with innovative new techniques for continuous-flow mass-spectrometry and laser sputtering. I also worked in labs at UCLA and Stanford, evaluating new ion microprobe techniques for oxygen isotope analysis of vanishingly small samples.

We were visited in Pasadena by UW grad-student **Liz King** who is also collaborating with scientists at Caltech, and who arranged a special family tour of my favorite building, the Gamble house, built by Greene and Greene in 1908 for Liz's great grandfather. I also saw **Julie O'Leary** (BS 2000) who was successfully wooed by Caltech as the first Samuel Epstein graduate fellow. We also saw a lot of our Pasadena neighbors, **Jean Morrison** (PhD 1988) and **Lawford Anderson** (PhD 1975), and we just missed seeing **Scott Sitzman** (MS 1996) and **Mary-Ann Kelly** (MS 1994) who bought the house next door to Jean and Lawford, but only realized their luck when they later saw "Badgers Make Better Geologists" proudly displayed on Jean's bumper.

In March, I cross-country skied around the tree-kill area in Long Valley caldera where magmatic CO<sub>2</sub> is

actively out-gassing. This is one of three calderas where UW post-doc **Ilya Bindeman** and I are studying magmatic evolution, and it is in the shadow of **Jade Star Lackey's** (MS 2000) field area in the high Sierras.

Although we enjoyed cheap unregulated electricity, and did not experience earthquakes or mudflows, we left LA in June, days ahead of a smog-bank and the Republican Convention.

Back in Madison, **William Peck** (PhD 2000) and I completed two papers on early Archean detrital zircons from Western Australia, reporting discovery of the oldest piece of the Earth that has been identified (4.404 Ga). (See a research article on page 23.) These papers conclude that continental crust was already differentiating from the mantle less than 150 m.y. after coalescence of the Earth. The high oxygen isotope ratio of the oldest crystal suggests early surface processes mediated by liquid water and the presence of oceans at 4.4Ga. These results contrast with the common view that early meteorite bombardment heated the Earth and vaporized the oceans to a Venus-type atmosphere. A group at UCLA working with a younger zircon has already confirmed this conclusion. These results fuel speculation about when life first evolved, how many times, and if the first life was fully extinguished by meteorite impacts during the first billion years. On Jan. 11, 2001, the first paper was published in *Nature* and reported on the front page of the *N.Y. Times*. That led to my Jan. 13 appearance on National Public Radio's *Whad'Ya Know* with Michael Feldman. To learn more: see *Zircons are Forever* at: <http://www.geology.wisc.edu/zircon>.

The fall term was taken up with teaching "Introductory Physical Geology" and graduate Metamorphic Petrology, preparing for the 2001 MSA-sponsored Stable Isotope short course that I will run and editing/writing the accompanying book. The Petrology grad-students and I took a field trip to the Adirondack Mountains, including a visit with **Cory Clechenko** to wollastonite skarns that are his thesis area.

#### ❖ Herb Wang

In May I had the pleasure of escorting Dave Hart and Tim Masterlark at the commencement ceremony. Dave's PhD thesis dealt with laboratory measurements of poroelastic properties of rock and Tim's with poroelastic modeling of the postseismic deformation following the 1992 Landers earthquake in southern California. Dave is doing a postdoc with Nik Christensen and Tim is doing likewise with Chuck DeMets.

My book *Theory of Linear Poroelasticity with Applications to Geomechanics and Hydrogeology* was on display at the Princeton University Press booth at GSA in Reno. That was the first time I saw the pub-