

signal to background

The roof that would not seal; Fermilab's fluttering comma; nature's particle bounty; the no-muss, no-fuss instant computing center; BaBar's six minutes of fame; nightclub physics; particle contest winners.



Photo: Reidar Hahn, Fermilab

From rivets to ribbits

An impromptu frog habitat vanished with final repairs to the roof of Fermilab's Meson Lab.

Leaks—lots of leaks—have plagued the lab's 12 blue and orange concave arches since it opened 32 years ago. The building was created as a striking aesthetic element of the Fermilab landscape, but the nearly 44,000 rivet holes provided 44,000 possible places for water to find a way inside.

"This roof is notorious. It has challenged every director the lab has had," says Erik Ramberg, head of the Meson test facility. "We'll see if this one triumphs."

The leaks forced scientists to move equipment, build indoor roofs four layers thick to protect machinery, and even shut down parts of experiments.

Amphibians, meanwhile, were in heaven.

Ramberg says that in his five years working in the lab, he often heard croaking. "I saw a snake in there yesterday," he says. "It has to be eating something."

Workers recently took to the roof to patch holes in the steel and fill in cavities. Then they applied an elastomeric coating that hardened in the sunlight to form a flexible sheet. Finally, they restored the building's original blue and orange colors.

Ramberg says he'll miss the building's quirks, such as the rain that would fall indoors the day after a snowfall. But he hopes the repairs stick, for both safety and financial reasons.

The building will soon become home to R&D projects for the proposed International Linear Collider. "This is a big milestone for us, because that facility will become a showcase for the laboratory over the next few years," says Randy Orgiesen, head of the lab's Facilities Engineering Services Section. "We'll have dignitaries coming from all over to tour it."

Rhianna Wisniewski



