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Memories of Bob Leighton

Years ago a picnic table stood behind E. Bridge under a large tree, since blown down. This was the lunch spot for a happy crew of young researchers including Bob Leighton, Chuck Wilts, Vince Peterson, Bart Locanthi and others. It was an hour filled with jokes and fun type experiments such as one inspired by the noisy Jay, a bird who shared our lunch. His uncanny sense of the presence of food had often been tested by slipping crackers behind backs or shuffling them under cover. Bob and Chuck, competitors since school days, vied to uncover this apparent sixth sense. A realistic imitation cracker was made by cutting out the cardboard picture on a box of Ritz crackers, carefully trimming and rounding to hide any exposed edge. A small part of the fake cracker was exposed to the view of the Jay. No response. More exposure. No response. No problem, a real cracker was completely hidden under the cardboard one. The stack of two crackers was then partially exposed with only the fake edge visible. In a flash, the bird was on the wing and snatched both crackers together, fake and real. Not even Bob made out how the bird dropped the fake in flight and flew off in triumph with the real thing. The blown down tree behind Bridge Lab. has regrown, now large and complete with Jay, but sadly without the picnic table.

Bob's unusual eyesight and imagination were well known in the cosmic ray group as he untangled the three-dimensional puzzle of cosmic ray tracks to find evidence of new elementary particles. Another view of these abilities came when a large group from the laboratory gathered one evening on the roof of W. Bridge to make a first sighting of man orbiting in space. We searched the sky carefully around the expected path and through the expected time without success. As the sky darkened it seemed there would be no winner in the first sighting contest. Then Bob's cry, "There it is!". We watched the speck of light move slowly across the sky and imagined the view of the world looking back the other direction.

Bob's quick mind and imagination made him a natural jokester. One of his best came during the construction of a large stack of flat cloud chambers resembling a 20-foot high stack of pancakes. The cosmic ray tracks within the pancakes were photographed through glass walls at the edges. Each layer was tilted slightly so that the distant camera could see through from one edge to the other. One cloud chamber, sandwiched between slabs of iron, could not be tilted. A neat solution was devised by instead tilting the line of sight by means of a huge prism. The expense of a 5-foot long prism of glass was avoided by using instead a glass walled tank of triangular cross section filled with liquid instead of glass. It looked like a great idea until the first roll of pictures was developed. All chambers showed normal tracks except the one viewed through the glass tank. It showed nothing. The angles were checked. There was no sign the chamber was abnormal or the level of liquid in the tank had fallen. But, no tracks. Finally, in desperation, we removed the prism and immediately exposed an embarrassing mistake. Lowering of the liquid level in the glass tank had not been observed because there was no liquid level. All of the liquid had drained through a small leak in the seams of the glass walls, and light rays passed through undeflected. Bob looked at the empty prism and laughed, "So, you have found glass walls do not a prism make."

Bud Cowan