avocation—a tribute to his courage, although I warn him of sleepless nights ahead. I'm happy to share headaches with him.

Much more could be said about the breadth and depth of Tom's accomplishments as a planetary geoscientist, his leadership in developing our understanding of the Earth's deep interior, and the honors accorded him for his research —among others, membership in the National Academy of Sciences and the Arthur L. Day Medal from the Geological Society of America. But I've been warned, separately and severely by three organizers of this meeting that if this laudatio takes much more than five minutes the Banquet will be correspondingly truncated and I may expect foreign substances in my food.

Mr. President, it is my great honor to present Thomas J. Ahrens for the 1997 Barringer Medal.

Robert O. Pepin
School of Physics and Astronomy
University of Minnesota
Minneapolis, MN 55455, USA

Barringer Medal Acceptance Address

1997 July 23, Maui, Hawaii

Officers and Members of the Meteoritical Society, Professor Pepin, ladies and gentlemen, it is a great honor to receive the Barringer Award. My first trip to a meteor crater was to Meteor Crater, or, as it has been historically called, Barringer Crater. Since the crater was surrounded to a radius of more than 10 km by fragments of the iron-nickel meteorite, Canyon Diablo, I never could understand why some geologists insisted that it was volcanic! What volcano emits iron-nickel? The 1 km in diameter Barringer Crater, Arizona is, of course, named after the mining engineer Daniel Barringer and his heirs who run the crater as a high-quality science exhibit. They are a scientifically appreciative family-run company who both support meteorite research, sponsor a wonderful interpretive program at the Meteor Crater Museum as well as support this meeting and this award. Their interest and support is appreciated by their community. My first trip to Barringer Crater was led by Eugene Shoemaker in 1972. Gene mapped the crater in 1960 for his Ph.D. thesis, figured out how planetary cratering worked, and went on to explain it to the rest of the world as he participated in exploring the Moon and then virtually all the solid planets and satellites in the solar system. Although I was an associate professor when Gene Shoemaker and Don Anderson brought me to Caltech, I learned much from Shoemaker and was devastated last Friday when I learned of his accidental death during his annual trek to Australia to map preserved craters on this desert continent.

After establishing a propellant gun-powered shock wave laboratory at Caltech with the help of my first post-doc, Fred Hörz, last year's Barringer Medalist, we published our first paper together in 1969 on impact-induced kink banding in biotite, in the *American Journal of Science*. Our major apparatus used in this study was a commercial single-shot shotgun used to launch projectiles we purchased from Sears for $70.

All the nice things that Bob Pepin said would not have happened without the lavish emotional support of my family represented at this ceremony by my dear wife, Earleen. Finally, I would like to close by saying again how thrilled I am in receiving this award. I will now show several humbling images of highlights of the development of the Caltech Shock Wave Laboratory going back to 1987 when you could still obtain surplus naval guns for research by just asking.

Incidentally, in 1967, Gene Shoemaker, then Chairman of Geology at Caltech, provided the $5K to transport a surplus-light gas gun from NASA/Ames Research Center to Caltech. This and some of the other apparatuses I just mentioned, and mostly the 23 graduate students who I worked with and 35 post-doctoral visitors to Caltech, have been the backbone of our program at Caltech. I warmly thank them all for their collaboration and fellowship.

Thomas J. Ahrens
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