Nova, *Project Universe*, Carl Sagan's *Cosmos*, and Walter Cronkite's *Universe*.

This cheerful proof of interest in science (and physics is keenly featured in these programs) leads me to urge that the American Institute of Physics dedicate a desk, a team, or an office to the special service of allowing television people convenient access to consultation on physics. A special desk could provide consultation to help shows be even more accurate, encompassing, believable, and symphonic.

The benefits are promising. What may be needed is a desk which television people can see and depend upon for convivial aid.

BRUCE BUSHMAN
6/81 *Laguna Beach, California*

AIP COMMENTS: Bruce Bushman suggests that AIP form a service to aid TV producers in their quest for accurate science and to help their production techniques. Such a TV service is already well-established, as are similar services for print and radio.

The Public Information Division of AIP, of which I am the director, has a long record of providing advice and counsel to the whole range of print and electronic media. In TV, we have often worked with network news and documentary producers as well as with local stations and freelance producers. A TV section, managed by David Kalson, produces *Science TV Report* for AIP. These are short science news reports aired on local, commercial TV news programs across the country. A radio section, under James Berry, produces *Science Report*, aired on public radio stations.

We have a physicist on our staff, Phillip Schewe, who provides scientific advice to writers and producers. He can also direct writers and producers to the physicists who are most expert in particular fields. The whole Public Information effort exists to serve the media—our conduits to the public.

AUDREY LIKELY
American Institute of Physics
9/81 *New York, New York*

Shakespeare quoted

Ednor M. Rowe in his article (Synchrotron Radiation) "Facilities in the United States" (page 28), should stick to radiation.

The quotation from *Henry V act* 4 is correct for the first nine words. Thereafter the quotation from the First Folio 1623 should read:

"Old men forget; yet all shall be forgot:
But hee'le remember, with advantages,
What feats he did that day."

The Quarto 1600 is void of the above three lines.

BEN RUSSAK
Crane, Russak & Co., Inc.
6/81 *New York, New York*

THE AUTHOR COMMENTS: I commend Ben Russak on his familiarity with Shakespeare's *Henry V*, and I am delighted that I have provided at least one part of that issue of PHYSICS TODAY that he can understand.

EDNOR M. ROWE
Synchrotron Radiation Center
6/81 *University of Wisconsin-Madison*

Delbrück obituary

In the obituary for Max Delbrück (June, page 71), an unfortunate mistake was made in the following: "Upon the outbreak of World War II, Delbrück did not return to Germany. Instead, he moved from Caltech to Vanderbilt University, where he served as an instructor of physics until 1947 (without ever receiving any promotion beyond this lowest of faculty ranks)." Delbrück came to Vanderbilt in 1940 as an instructor, a rank he held until the end of the war. He was promoted in 1945 to Assistant Professor and the very next year, to Associate Professor of Physics. At a time when molecular biology and biophysics were not major fields and not included in physics departments, Vanderbilt's Department of Physics and Astronomy provided an important base for Delbrück where he and Salvador Luria began their pioneering work that lead to their Nobel Prize.

J. H. HAMILTON
Vanderbilt University
8/81 *Nashville, Tennessee*

Faith versus reason

Lawrence Cranberg's letter (June, Page 11) contains a misguided conciliatory tone and advocacy regarding the conflict between religion and science. The foundation of science is reason—the power to observe, identify, and integrate into your knowledge the material provided by the senses. The foundation of religion is faith—belief without the use of reason. (The erroneous use of faith to mean confidence or expectation is not considered here.)

Reason and faith are irrevocably irreconcilable. You can know why $2 + 2 = 4$ or you can believe it on faith, not both. Knowledge results only when, by means of your consciousness, you identify some aspect of existence. Specific mental processes are required before you can be certain of correct identification. Use of an arbitrary process is improper. Faith is worse than

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coin-flipping. Coin-flipping gives you a 50-50 chance of being right. With faith you have no idea how often you may be right or wrong. Faith is not a guide to truth, and principles accepted by faith are not a proper guide to action. Faith should be condemned as an improper method of using one's mind.

Creative insight and intuition can lead to useful hypotheses, but belief requires proof of the correspondence with existence by a process of reason. No other tool exists. Physicists should lead in advocacy of reason as the sole method one has to acquire knowledge.

ROBERT H. HARTFORD
Shippensburg State College
7/81 *Shippensburg, Pennsylvania*

THE AUTHOR COMMENTS: How does one account for the vast practical achievements in art, science, applied ethics, and so on, of those inspired by religious faith, if faith is unrelated to reason, as Hartford alleges? "Thou shalt not kill" is an article of religious faith. Is it therefore just a lucky strike? May the claims of reason sometimes be understated and have to be searched out in the way researchers are always finding rewards in unlikely places?

LAWRENCE CRANBERG
7/81 *Austin, Texas*

Advent of 10^6 V x-rays

I was surprised and pleased to see myself in a photograph with Charlie Lauritsen on page 44 in July. We are shown beside our million-volt x-ray tube in the High Voltage Laboratory of Caltech in 1928. But the material taken from Millikan's papers does not go back quite far enough to include the start of the story.

In June 1927 I finished the first year of a National Research Fellowship at Princeton. That year had been spent in measuring the limitations of Geiger point counters. I had been working with these counters in 1924–1925 in my doctoral research at the University of Chicago. My research also used a 250-kv x-ray tube, and I wondered why no one had made use of one of the million-volt transformer banks then available to see how electrons behaved when their mass was more than doubled relativisticly as it would be at a million volts. Having pretty well exhausted the possibilities of point counters, I asked to have my second fellowship year at Caltech where one of these million-volt sets was located.

My request was granted and I was duly welcomed at Caltech by Millikan. My bed had slid across the floor in an earthquake the night of my arrival. I paid little attention, assuming it to be the daily jiggle. Had I run out in the