

letters

products, then the one kilogram of radioactive wastes added by the explosion would be a small amount by comparison. No expensive processing of the rods is needed—just transportation to the bottom of the hole. If the residual uranium and plutonium should become valuable in later millennia, they could be mined at that time. In short, the nuclear explosive test sites can be viewed as existing waste disposal areas. Isn't it conceivable that they could be expanded to include nuclear-reactor wastes as well as nuclear-test residues?

JAMES W. SHEARER
Livermore, California

1/83
THE AUTHOR REPLIES: James Loman points to an interesting technical issue concerning the effects of ionizing radiation on rock salt. For the protection of the rock salt it may be necessary to use an overpack around the waste canisters that absorbs the radiation without undesirable physical or chemical side effects.

To use nuclear explosives for the emplacement of high-level nuclear wastes in a geologic formation, as suggested by Shearer, appears to me somewhat like fighting fire with fire. I would be particularly concerned about the effect such explosions would have on the long-term integrity of the geologic formation. This disposal concept belongs to the class of alternative disposal options referred to as "rock melt concepts"; to date they have received only limited attention.¹ In the Final Environmental Impact Statement on the Management of Commercially Generated Radioactive Waste (DOE/EIS-0046 F, October 1980), their major problems are summarized as follows: "Primary needs would be for better understanding of heat-transfer and phase-change phenomena in rock to establish the stability of the molten matrix and for development of engineering methods for emplacement" (chapter 6, page 28).

References

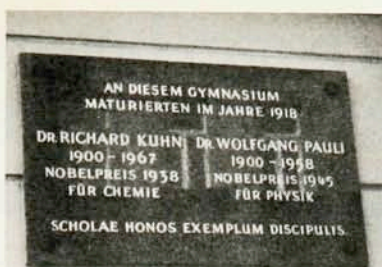
1. Bechtel National, Inc., "Alternative Waste Disposal Concepts—An Interim Technical Assessment," DOE Office of Nuclear Waste Isolation, report ONWI-65, Battelle Columbus, 1979.

ROBERT O. POHL
Cornell University
Ithaca, New York

2/83

Another class with two Nobels

A recent news story (February, page 53) posed the question of whether a clustering of later prominent scientists occurs in certain high-school classes. I enclose a photo of a plaque on my old high school, the "gymnasium" in the 19th



district of Vienna, Austria, which commemorates the two Nobel prize winners who graduated in 1918, in a class of 27 students. They were Wolfgang Pauli (physics, 1945) and Richard Kuhn (chemistry, 1938). It must, of course, be remembered that a gymnasium is a college preparatory school, not strictly comparable to a high school in the US.

JOHN F. KRASNY

2/83

Kensington, Maryland

Bronx High School of Science

I read your news story in February (page 53) concerning the 1950 class of Bronx High School of Science with some interest since I am a 1954 graduate of that school. As you can see, my name is missing from the list of physicists who graduated in the years 1940-60, and this leads me to suspect that others also may have been missed. Perhaps PHYSICS TODAY could render Gerald Feinberg a service by issuing a call to readers who are Bronx Science graduates to identify themselves. I hope that Feinberg writes his book, and I look forward to reading it.

EDWARD GELERINTER
Kent State University
Kent, Ohio

2/83

I really enjoyed your article about Bronx Science. However, I think that you only got the tip of the iceberg. I graduated in the Class of 1955. You listed two physicists from that class, myself and Norm Gelfand, but I know of five others: Michael Arons (CCNY), Bob Einstein (University of Illinois), Tom Ferbel (University of Rochester), Ed Ginsberg (University of Massachusetts, Boston), Robin Motz (PhD in physics from Columbia, formerly on the faculty of Stevens Institute of Technology and an associate editor of the American Journal of Physics. Now an MD and on the faculty of Columbia College of Physicians and Surgeons).

Tom Ferbel tells me that Don Landman of Hawaii and Claude Penchina of University of Massachusetts, Amherst, are also from our class.

MICHAEL J. TANNENBAUM
Brookhaven National Laboratory
Upton, New York

2/83

continued on page 92

CHARGE SENSITIVE PREAMPLIFIERS



NEW PRODUCT

FEATURING

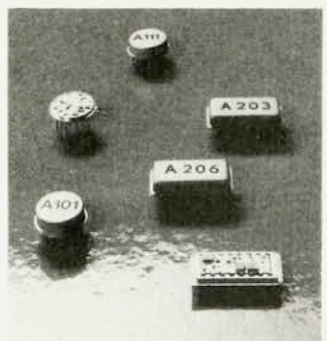
- Thin film hybrid technology
- Small size (TO-8, DIP)
- Low power (5-18 milliwatts)
- Low noise
- Single supply voltage
- 168 hours of burn-in time
- MIL-STD-883/B
- One year warranty

APPLICATIONS

- Aerospace instrumentation
- Mass spectrometers
- Particle detection
- Imaging
- Research experiments
- Medical and nuclear electronics
- Electro-optical systems

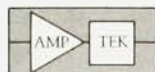
ULTRA LOW NOISE < 280 electrons r.m.s.!

Model A-225 Charge Sensitive Preamplifier and Shaping Amplifier is an FET input preamp designed for high resolution systems employing solid state detectors, proportional counters etc. It represents the state of the art in our industry!



Models A-101 and A-111 are Charge Sensitive Preamplifier-Discriminators developed especially for instrumentation employing photomultiplier tubes, channel electron multipliers (CEM), microchannel plates (MCP), channel electron multiplier arrays (CEMA) and other charge producing detectors in the pulse counting mode.

Models A-203 and A-206 are a Charge Sensitive Preamplifier/Shaping Amplifier and a matching Voltage Amplifier/Low Level Discriminator developed especially for instrumentation employing solid state detectors, proportional counters, photomultipliers or any charge producing detectors in the pulse height analysis or pulse counting mode of operation.



AMPTEK INC.

6 DE ANGELO DRIVE, BEDFORD, MA 01730
U.S.A. TEL: (617) 275-2242
With representatives around the world.

Circle number 20 on Reader Service Card