

Sawyer, who retired in 1964 from his posts as dean of the graduate school and vice president for research at Michigan, now divides his time between his activities at the American Institute of Physics and the National Bureau of Standards where he is chairman of the National Academy of Sciences advisory committees to the Bureau.

#### **Optical Society Awards Wald 1966 Ives Medal**

**George Wald**, professor of biology at Harvard University, was awarded the 1966 Frederic Ives medal of the Optical Society of America. Wald is an authority on the biochemistry of vision and was the first to identify vitamin A in the retina of the eye. The award was made in recognition of the extent to which these and other studies have, in the words of the Ives Medal citation, "contributed uniquely to our knowledge of vision."

#### **Gordon Receives Gold Medal for Ionospheric Studies**

The Balzh van der Pol gold medal has been awarded to William E. Gordon, dean of engineering and science at Rice University, at the general assembly of the International Scientific Radio Union in Munich. The award was in recognition of Gordon's studies of the ionosphere and development of related electronic equipment. He also played a principal role in the conception and design of the Arecibo Ionospheric Observatory.

#### **William F. Meggers Dies; Was World-Famous Spectroscopist**

The dean of American spectroscopists and the world's leading contributor to the elucidation of atomic energy levels, William F. Meggers, died on 19 Nov. at his home in Washington, D.C., after a period of hospitalization for a heart attack. He was 78.

Meggers joined the National Bureau of Standards in 1914 as a laboratory assistant to the late Keivin Burns, and had been chief of the spectroscopy section of the Bureau from 1920 until his retirement in 1958. This last event had little effect on his scientific activity, however, and at the time of his death he was working to complete his

analyses of the very complex spectra of the elements thulium, ytterbium and hafnium.

Meggers puzzled out the external electronic structures of many more atoms and ions than any other scientist, and was in great degree responsible for the establishment of spectroscopy as a satisfactory tool for chemical analysis. He devoted more than 50 years to



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correcting deficiencies in spectroscopic data, and described and interpreted the spectra of more than half the known elements in many stages of ionization. He was the first to unravel spectral structures as complex as those of the rare-earth elements.

Meggers' outstanding characteristic, apart from the meticulous care with which he attacked scientific problems, was his persistence in measuring and searching for clues in the complex maze of atomic data that so absorbed him. For more than half a century he spent a majority of his days patiently sitting at a comparator, measuring the wavelengths of atomic spectrum lines, estimating and recording their intensities in his neat legible script, and later at home, far into the night working out relationships among their frequencies from which he could deduce the quantum numbers of the energy states from which they originated. Slowly and systematically he dissected the great mounds of information he accumulated, knowing that in them must be buried the choice jewels of information he sought. His pace in everything was deliberate, and his work almost never needed revision.

Meggers was born in Wisconsin in 1888. His family's circumstances pre-

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## **Ge(Li) beans**

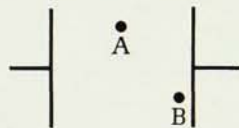
SOMETHING TO CHEW ON.

### **Time resolution**

Whether your Ge(Li) detector is planar or coaxial, of whatever cross-section, there is a fundamental spread in the pulse risetime. This is basic to the nature of a p-i-n device.

Gamma-rays produce ionizing events throughout the active volume of the detector. The collection time of the carriers produced will depend upon the position of each ionizing event. As a result, there must be a spread in the pulse risetimes.

To illustrate. Say that a gamma-ray is absorbed (via photoelectric effect, etc.) at point A, generating electron-hole pairs in the vicinity of A. The risetime of the signal is the time for the carriers to be swept from point A to either collecting electrode.



However, a gamma-ray may instead be absorbed at point B, close to one of the collecting electrodes. Then the risetime will be the time for the carrier which must reach the more distant electrode to be swept all the way across the depletion layer.

Clearly, in an ideal planar diode, this effect will account for a variation in risetime of about a factor two. This fundamental effect is the largest source of risetime variation in Ge(Li) detectors. Risetime variation is the major limiting factor in time resolution.

Crossover timing (such as is done with scintillation counters) is not the answer. To get good resolution with a Ge(Li) detector, use careful leading edge timing.

For details on this and other topics, please write or call. Or visit us at the New York APS meeting (booth 17) and pick up a copy of our GUIDE TO THE USE OF Ge(Li) DETECTORS.

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