

NE-110 plastic phosphor

Light Output % Anthracene	Pulse Width ns	Decay Time ns	Light Attenuation Length cm	Maximum Emission Å
60	3.9	3.3	250	4350

for long light
path applications.
write for data.

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SEARCH AND DISCOVERY

cists, 40 postgraduate students, about 50 engineers doing research and about 100 engineers for the accelerator factory.

Budker says the council members often disagree at their round table. But he is a forceful man, and he usually convinces them to try brave, new ideas.

—GBL

Ultrasonic Microscope May Be More Sensitive, Nondestructive

An ultrasonic microscope might be 10 000 times as sensitive to detail as an optical microscope and offer better signal-to-noise ratio. It would not destroy its samples as do the beams of electron microscopes and the staining required with optical microscopes. Thus you could watch effects as you cause them. To test the principle Marvin Chodorow and Bertram A. Auld plan to build one at the Stanford Microwave Laboratory.

They will use 1000-MHz or higher frequencies to produce 3-micron or shorter wavelengths. After scattering from the specimen, sound waves will be converted to visual images by one of two methods that the builders are now exploring. One is modulation of a light beam, which would make an image on film. The other is scanning the object and putting the image on a cathode-ray tube with television techniques.

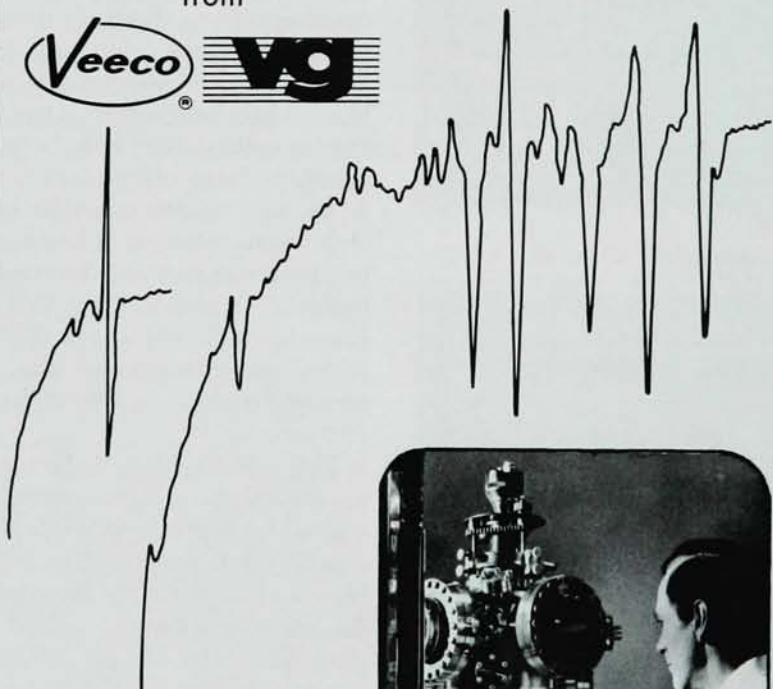
Although wavelength and resolution will be about the same as in an optical microscope, lower frequencies will offer advantages in detection.

Josephson Effect Permits New Look at Fundamental Constants

Our old friends, the fundamental constants, get a new scrub and polish in the July *Reviews of Modern Physics*.¹ Barry N. Taylor (RCA, Princeton), William H. Parker (University of California, Irvine) and Donald N. Langenberg (University of Pennsylvania) offer best values that have estimated errors about a third as large as those in a 1963 adjustment by E. Richard Cohen and Jesse W. M. DuMond.² The values themselves have changed by several standard deviations.

Motivation for the new study came largely from the ac Josephson effect in which an ac supercurrent flows between two weakly coupled superconductors when there is a potential dif-

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