titative interpretation of spectra from nonisothermal sources, the distribution of elements in the solar atmosphere and the universe, and concluded with some interesting observations on the evolution of the elements.

The Second Western Spectroscopy Conference provided ample opportunity for spectroscopists to learn, from recognized authorities, about the use of spectroscopic techniques in fields other than their own. A technical program of the type presented at Pasadena offers an excellent opportunity if not for publication of original papers at least for study of current problems in related fields.

S. S. Penner
California Institute of Technology

Michigan Physicists Meet

An evening of physics—consisting of coffee hour, dinner, physics exhibit, and talk on nuclear pile physics —was held March 21st on the Western Michigan College campus. As was the case last year, it was sponsored jointly by the physics departments of Kalamazoo College and Western Michigan College. It was attended by physics major students and faculty from six other colleges and junior colleges.

The physics exhibit, following the dinner, was partly modeled after the exhibit of novel devices held in conjunction with G. W. Stewart's University of Iowa Colloquium of College Physicists every June. In this case, however, the competition was between undergraduate college students at the various schools instead of between the teachers. There were thirteen exhibits this year. The winners were selected by a vote of those viewing the exhibit. First prize went to John DeBree of Hope College for his diffusion cloud chamber. Second prize was awarded to Charles Kelly of Alma College for his apparatus for transmitting speech on a light beam.

The speaker of the evening was Frederick LaViolette of the Knolls Laboratory of the General Electric Company, who spoke on the subject "The Physics of the Nuclear Pile". About 125 attended the talk.

Ralph O. Kerman
Kalamazoo College

Radiation and Dielectrics

Approximately 150 physicists, chemists, and engineers attended a Conference on the Effects of Radiation on Dielectric Materials at the Naval Research Laboratory, Washington, D. C., on December 14–15, 1954. Both the Laboratory and the Office of Scientific Research of the Air Research and Development Command sponsored the meeting, at which 17 papers were presented, five on radiation chemistry, four on industrial utilization and test procedure, and eight on effects in inorganic dielectrics.

The radiation facilities and program at the Naval Research Laboratory were described by James H. Schulman, general chairman of the conference, following a welcome to the guests by E. O. Hulburt, director of research at NRL, and by Lt. Col. J. D. Warthman of the Air Research and Development Command.

The mechanisms of radiation chemistry, including the reactions of excited molecules, ionized molecules, and free and atomic radicals, were described by M. Burton, of the University of Notre Dame. S. E. Crecelius, Naval Research Laboratory, reviewed classical polymer chemistry as a guide for later radiation effects discussions of organic materials. T. D. Callinan, Naval Research Laboratory, presented results on polymerization using gamma rays. G values as high as 10^6 have been obtained and products formed by radiation are characterized by high melting points and greater densities. K. H. Sun of Westinghouse reviewed the effects of radiation on polymers, and J. Saldick of General Electric suggested that gamma rays, electron beams, and pile irradiation produce equivalent effects for equal energy absorption in organic materials. L. A. Wall of the National Bureau of Standards proposed that the radiation stability of organics could frequently be predicted on the basis of their thermal stability. Measurements by R. A. Meyer, now at Brookhaven National Laboratory, of radiation induced conductivity in organics indicated that it was electronic in character.

R. Smoluchowski of the Carnegie Institute of Technology presented a general introduction to the effects of high energy radiation in inorganic solids and with E. Pearlstein summarized work done at Carnegie on ionic conductivity and density changes in alkali halides. Aluminum oxide, quartz, synthetic spinel, and silica have been irradiated by G. J. Dienes and P. W. Levy of the Brookhaven National Laboratory with the production of some absorption bands probably due to "knock-on" interstitial atoms or ions. C. J. Delbecq, P. Pringsheim, and P. Yuster of the Argonne National Laboratory discussed the production and stability of color centers in alkali halides, mechanical strain in these materials, and radiation effects in sodium nitrate. The production of colloid dispersions by irradiation followed by annealing was discussed by R. L. Carter of North American Aviation. N. J. Kreidl of Bausch and Lomb described the properties of glass made insensitive to radiation by the addition of cerium and experiments aimed toward understanding this effect. W. Primak of the Argonne National Laboratory surveyed a wide range of physical changes in materials exposed to pile irradiation. Experiments on the effect of pile irradiation on refractory crystals such as zircon, quartz, and beryl were reported by D. S. Billington and M. C. Wittels of the Oak Ridge National Laboratory. W. J. Sturm of ORNL discussed experiments on the change of lattice parameter on pile bombardment of LiF and on the effect of annealing the damaged crystal.

The problems associated with the use of dielectric materials in nuclear reactors designed for production of energy were discussed in papers by G. W. Pomeroy and C. Mannal of the General Electric Company.

At a luncheon for the delegates, A. R. von Hippel of