

## TRACK

Sat. March 24.....	Combined J.C.'s.....	at Caltech
Sat. March 31.....	Caltech-Pomona-U.C.L.A.....	at U.C.L.A.
Sat. April 7.....	College Relays.....	at Compton
Sat. April 14.....	Caltech-U.S.C.-Pomona.....	at Caltech
Sat. April 21.....	A.A.U. Meet.....	at Coliseum
Sat. April 28.....	Caltech.....	at Occidental
Sat. May 5.....	Conference Meet.....	at Caltech
Sat. May 12.....	Caltech-U.S.C.-U.C.L.A.- California.....	at Coliseum
Sat. May 19.....	Fresno Relays.....	at Fresno
Sat. May 26.....	Coliseum Invitational.....	at Coliseum
Sat. June 2.....	Modesto Relays.....	at Modesto
Sat. June 9.....	Pasadena Games.....	at Caltech

## ULTRA-HIGH FREQUENCY CONCEPTS

**D**R. SIMON RAMO, who is research engineer at General Electric's Schenectady research laboratory, has written a short book, "Introduction to Microwaves," which will soon be published by McGraw-Hill Book Company. The publication of a number of articles on ultra-high-frequency concepts by Dr. Ramo created such an extensive demand for reprints and lectures that he decided there was considerable need for a book giving a qualitative treatment of electrical concepts that are important at high frequencies.

The book gives a completely nonmathematical description of the physical basis for all microwave phenomena, covering transit-time electronics, velocity modulation, radiation, transmission lines, resonant cavities, and wave guides. Dr. Ramo correlates microwaves

with lower frequency electricity in simple language and with a large number of explanatory diagrams.

Dr. Ramo received his Ph.D. degree at California Institute of Technology in 1936, where he did high voltage research. Immediately afterward he started work at General Electric Company. In 1941 he was honored by Eta Kappa Nu, electrical engineering fraternity, as "one of the most outstanding young electrical engineers in America." At General Electric Dr. Ramo continued his association with academic work by organizing the advanced course there in high-frequency engineering. Although he is no longer actively in charge, he is still a frequent lecturer. His current work is in ultra-high-frequency generation, modulation, and reception, and in electronoptical studies. Dr. Ramo holds a number of patents in electron microscopy and has been granted over a dozen patents in the high-frequency field.

## CALTECH PROFESSOR RECEIVES HONOR

Dr. Chester Stock, professor of paleontology at the California Institute of Technology since 1926, was elected president of the Paleontological Society of America at its annual meeting held in New York in December. Dr. Stock has been serving also as a member of the Council of the Geological Society of America, to which office he was elected for a three-year term.

*Engineering and Science* has had the privilege of presenting several articles by Professor Stock. His work in the field of paleontology has been outstanding.

## PERSONALS

**I**T WILL be helpful if readers will send personal items concerning themselves and others to the Alumni Office. Great interest has been shown in these columns, but more information is required. Do not hesitate to send in facts about yourself, such as change of position or location, present job, technical accomplishments, etc. Please help.

—Editor.

### 1922

GEORGE C. HENNY is on the faculty of Temple University Medical School, Philadelphia, Pa., as the head of the department of physics.

WILLIAM D. POTTER is a hydraulic engineer for the Soil Conservation Service, Washington, D. C. Mr. Potter lives at Alexandria, Va.

### 1924

LIEUTENANT-COLONEL EDWARD D. LOWNES, U.S.A., Engineers Corps, was in southern California recently on a 30-day leave. He has been stationed in Alaska, North British Columbia, and the Yukon territory, in charge of construction projects.

### 1925

ALFRED L. ERICKSON holds the position of vice-president of J. T. Thorpe, Incorporated, Los Angeles, Calif.

JOHN TEMPLETON is superintendent of the Brandy Forging Company, Los Angeles, Calif.

### 1926

JOHN E. MICHELMORE was acting Exalted Ruler of the Glendale Elks Lodge No. 1289 when they paid honor to the men in the armed services at a special program on January 29.

BRUCE H. MILLS is packing house manager for Rancho Sespe, Fillmore, Calif.

WALLACE C. PENFIELD holds the position of public works director of the County of Santa Barbara, Calif.

MAJOR ORRIN H. BARNES and Miss

Shelia Jane Hiler were married January 14 at Post Chapel, A.P.O. 956.

### 1927

LEE W. RALSTON is director, division of trade and industrial education, Los Angeles County Schools.

ARCHIE P. KING is associated with Bell Telephone Laboratories, New York, as a research engineer.

ROBERT M. MOORE of the Western Electric Company, formerly stationed at San Diego, has been transferred to the New York office.

### 1928

MARTIN E. NORDBERG is employed by Corning Glass Works, Corning, N. Y., as a research chemist.

MAJOR ARTHUR P. BANTA is chief of the War Planning Section, stationed in Oahu. He finds his work most interesting and enjoys the climate of the islands.

RALPH M. WATSON holds the position of chief engineer, centrifugal division of the Worthington Pump and Machinery Corporation, Harrison, N. J.

S. B. BIDDLE, JR., is a field engineer for Leeds and Northrup Company, San Francisco, Calif.

### 1929

KNOWLTON R. BIRGE holds the position of senior electrical engineer for the Municipal Light and Power Company, Pasadena, Calif.

WILLIAM W. BOOTH is on the faculty of Claremont High School, Claremont, Calif., as a mathematics teacher.

### 1930

DR. JOSEPH URMSTON, one of the nation's foremost orchid hybridizers, has arranged to exhibit rare orchids, never before shown to the public, at the spring flower show, Brookside Park, Pasadena. The orchid fancier is an Army corporal in the Medical Corps, attached to a hospital at Ogden, Utah. The entry was arranged during Corporal Urmston's furlough.

LIEUTENANT-COMMANDER FREDERICK T. SWIFT is in the radio material office of the Navy Yard in Honolulu.

DR. JOHN M. PEARSON is physicist and manager of the Susquehanna Pipe Line Company, Philadelphia, Pa.

### 1931

LELAND D. PRATT is superintendent of Kelco Company in San Diego, Calif.

### 1932

WILLIAM PICKERING was made chairman of the electronics division of the Los Angeles section, American Institute of Electrical Engineers.

DR. JOHN A. LEERMAKERS is technical assistant to the director of research, Eastman Kodak Company, Rochester, N. Y.

RAY T. OELSCHLAGER is with Douglas Aircraft Company, Incorporated, Santa Monica, Calif., in the capacity of a stress analyst.

HOWARD W. FINNEY holds the position of senior accountant for Lybrand, Ross Brothers and Montgomery, Los Angeles, Calif.

### 1933

ROBERT L. SMALLMAN was made vice-chairman of the electronics division of the Los Angeles section, American Institute of Electrical Engineers.

D. DWIGHT TAYLOR announces the establishment of an office for engineering calculations and consultation in physics in Pasadena, Calif.

LIEUTENANT-COLONEL JOHN C. MONNING, formerly employed as a structural engineer for the city of Los Angeles, recently was awarded the Legion of Merit for outstanding services in clearing the Port of Piombino, Italy, in order that it could be used by the Fifth Army. Lieutenant-Colonel Monning has been overseas since January, 1943.

### 1934

GUY O. MILLER is a design supervisor for the Phillips Petroleum Company, Bartlesville, Okla.

### 1935

DR. PAUL GENATCHE, assistant to the general manager of the Mexican Light and Power Company, Ltd., Mexico City, for the past six years, is back in southern California with his family.



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## ALUMINUM COMPANY

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MARCH 1945

J. B. STODDARD is a chemical engineer for the Arabian American Oil Company, San Francisco, Calif.

1937

F. H. ALLARDT is associated with Douglas Aircraft, Long Beach, Calif., as supervisor of tool design.

HAROLD ALWART is in charge of research and development work at Clayton Mark and Company, Evanston, Ill. Mr. and Mrs. Alwart are the proud parents of a baby boy, Stephen, nearly three months of age.

DR. DEAN NICHOLS, having graduated from Yale Medical School in '43 and interned at Baltimore City Hospital, has a fellowship in dermatology and syphology at Mayo Clinic. On account of his health, he is taking a year's leave of absence which is being spent at La Jolla, Calif.

1938

DR. NEWMAN A. HALL is associated with United Aircraft Corporation, East Hartford, Conn., as a research engineer.

PAUL SIECHERT was recently elected president of the Junior Chamber of Commerce of Alhambra, Calif.

1939

WILLARD M. SNYDER, U.S.N.R., recently was promoted to the rank of lieutenant. Lieutenant Snyder is a junior pilot for Air Transport Squadron Eleven, which, under the Pacific Wing of the Naval Air Transport Service, flies 2,000,000 miles a month to deliver war materials to advanced area bases. Prior to service, Willard was employed as a junior engineer in the Central Valley Project Headquarters of the U. S. Bureau of Reclamation at Sacramento.

EDWIN F. SULLIVAN, assistant engineer, U. S. Bureau of Reclamation, Sacramento, Calif., has been elected secretary-treasurer of the Sacramento section, American Society of Civil Engineers.

KENNETH R. BRAGG and Miss Lee Goodwin were married recently and intend to make their home in Manhattan Beach, Calif.

QUIDO M. SHULTISE is now communications engineer for the Standard Oil Company of California and expects to be located in the northern part of the state.

1940

O'DEAN ANDERSON is now associated with the Raymond-Morrison-Knudsen Company, Barcelona, Venezuela, South America.

CLAUDE DAVIES, formerly with Vega Aircraft, is now employed by Packard-Bell in Los Angeles, Calif.

LIEUTENANT-COLONEL PIERRE M. HONNEL is assistant professor, Department of Chemistry and Electricity, U. S. Military Academy, West Point, N. Y.

LIEUTENANT (j.g.) WILLIAM LAWSON, U.S.N.R., is in the ordnance department of the Mare Island Navy Yard.

1941

DAVID S. WOOD and Miss Constance Loree Simansen of Portland, Ore., were married on January 20 at Santa Fe, N. M. Since the outbreak of war, Mr. Wood has been engaged in research work for the government.

GEORGE K. ZEBB and Miss Martha MacDermid were married recently in Pasadena. Mr. Zebb is employed at the Institute.

MAJOR GREENUP B. PATTERSON, JR., assigned as a pilot with the 19th Weather Squadron, has arrived in Egypt to take up duties in the Air Forces. Before entering service, Major Patterson was a chemist with the Caminol Oil Company in Santa Fe Springs, Calif.

ENSIGN JEREMY A. JONES, U.S.N.R., is stationed at the Aviation Supply Office, Philadelphia, Pa.

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IRVIN SEEGMAN is in the Rubber Laboratory, industrial department, at the Mare Island Navy Yard.

ROY C. VAN ORDEN, civil engineer, is a stress analyst for the Douglas Aircraft Company at Long Beach. He and his wife, Betty, are the proud parents of an 18-months-old daughter, Darole Ann.

LIEUTENANT WARREN HALL, U.S. N.R., is in the industrial department at the Mare Island Navy Yard.

LIEUTENANT LEIGHTON R. MOORE, U.S.N.R., is in the ordnance department at the Mare Island Navy Yard.

WILLIAM G. KENNEDY holds the position of research division engineer for United Aircraft Corporation, East Hartford, Conn.

LIEUTENANT G. R. DALL is stationed on Saipan with the U. S. Air Forces.

PRIVATE PHILIP O. JOHNSON is assigned to Wright Field, Dayton, Ohio.

LIEUTENANT (j.g.) JOHN McCLAIN is with the Eleventh Naval District, San Diego.

LIEUTENANT JACK ALFORD is an engineering officer in the assembly and repair department, Naval Air Station, San Diego.

PRIVATE HARRISON A. PRICE, U.S. Army, is now at Ann Arbor for a six-months' training period in sanitary engineering.

VICTOR G. BRUCE is a staff member at the radiation laboratory, Massachusetts Institute of Technology, Cambridge, Mass.

## 1943

EDWARD A. WHEELER received an honorable discharge from a U. S. Marine Corps officers' candidate class last year and is now assistant personnel manager of the Western Felt Works of Chicago.

DR. HERBERT ELLIS has resigned his position with Rheem Manufacturing Company and has accepted a position as industrial engineer with O.S.R.D. headquarters in Washington, D. C.

SEAMAN (1/c) ROLFE LA FORGE is at the radar school in Del Monte.

LIEUTENANT (j.g.) W. LAWSON JONES is with the Navy in Guam, in charge of maintenance of a group of Navy planes. As a side line he is studying the fish and vegetation of Guam and doing some painting.

CHESTER D. MILLS, JR., is stress analyst for Consolidated Vultee Aircraft Corporation in San Diego, Calif.

LIEUTENANT (i.g.) DAVID ARNOLD, U.S.N.R., is in the ordnance department at the Mare Island Navy Yard.

ENSIGN DAVID A. ELMER has just received a promotion to lieutenant (j.g.).

## 1944

PRIVATE JACK KETTLER stopped in at the Institute on a furlough, after which he was to report to Fort Meade, Md. Jack has been stationed at Camp Maxey, Texas.

ENSIGN F. A. BEHRENS, JR., U.S. N.R., is now engineering officer of the U.S.S. YMS-407, motor minesweeper, operating in the Pacific, after a two-months' tour of duty in the Atlantic area.

FRED MORRIS has recently been commissioned a second lieutenant at Ft. Monmouth, N. J.

## Ex-1947

PRIVATE INGARD M. CLAUSEN, now in Germany with an armored engineering division of the 10th Armored Division, has been awarded the Bronze Star Medal. The citation said that "Private Clausen, while in the vicinity of Kerling, France, advanced in front of a task force and, with utter disregard for his own safety, located enemy mines by means of a mine detector until he was seriously wounded."



## Yes, we know there's a war going on!

—but here's how we're trying to overcome the difficulties of wartime travel

Our trains are longer and schedules are slower now. Space is hard to get. People frequently have to stand in line to buy tickets or to get into the dining car. In short, our service isn't what it was before the war.

The main reason is that our volume of passenger traffic is *five times* that of 1940, with just about the same number of cars we had then. And, like everybody else, we are short of help.

Wherever possible we have taken aggressive steps to lessen the difficulties of wartime travel. For example:

**1** Our "train assignment plan" for coach passengers has to a large extent eliminated overcrowding and standing on our long-distance trains. We endeavor to sell only as many seats as are on the train, and each passenger gets a reservation slip.

**2** "Passenger aides," have been stationed on long-distance S. P. coach trains. They assist women traveling with children, aid the aged and infirm, and perform other services to make the journey as comfortable as possible.

**3** We have greatly expanded telephone reservation bureaus, increased our forces handling reservations, and devised new reservation systems. The situation is not perfect, but it is much better than it was.

**4** We have increased the number of chair car porters, so that cars are now generally kept quite clean, a difficult problem because of the litter from box lunches, etc.

**5** "Train service agents" have been added to the staffs of long-distance coach trains. These men supervise the chair car porters, see to it that the trains are kept tidy, try to overcome difficulties and meet emergencies.

We don't claim that all our people are perfect. They're human beings, and are under the strain of crowded war conditions. By and large we think they're doing a swell job and we're proud of them.

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