

C. I. T. NEWS

ROCKET RESEARCH AND DEVELOPMENT

ONE of the war activities at California Institute of Technology has been revealed as research and development work on rocket projectiles. Begun in September, 1941, this work has already resulted in a variety of rocket weapons which are in effective service use. One type of rocket projectile has been employed for over two years in antisubmarine warfare. Another type was used in the invasions of North Africa, Sicily, Italy and France, in the landing on Arawe, and in subsequent island-hopping in the South Pacific. It is now standard equipment for all amphibious operations. More recently, air-borne rockets have been developed as armament for carrier-based and amphibian planes, and have been used successfully against German submarines in the Atlantic and against Japanese shipping and land installations in the Pacific.

This information was revealed in an official Navy press release on August 6, 1944. The release explained that rocket work at the Institute is carried on cooperatively by the Navy and a National Defense Research Committee group of Institute scientists and engineers, under contract with the Office of Scientific Research and Development. (The latter is the Federal contracting and spending agency for the promotion of research contributing to the war effort; the National Defense Research Committee is a technical advisory committee within OSRD which recommends and supervises contracts).

The principal advantages of rockets are great fire power and mobility. Since rockets involve no recoil problem, they are particularly well adapted to installation on light landing craft, airplanes, and motor vehicles. The launching device is relatively simple and cheap to manufacture, is light in weight, and easy to install. In warfare involving rapid movement, these factors are highly important, since they enable the accumulation of great fire power much more rapidly than can be done with conventional artillery.

Rocket work, once initiated at the Institute, made rapid progress because of the close cooperation of the War Department, the Navy Department, and the Office of Scientific Research and Development. Dr. Vannevar Bush, Director of the OSRD, made ample funds available for the work and encouraged it in every possible way. The Navy followed the work closely from the start and used every means to expedite it. Rear Admiral Ralston S. Holmes, who was Commandant of the Eleventh Naval District when rocket work began at the Institute, made the facilities of the district available for testing purposes; and upon his retirement in January, 1943, he was assigned to the Institute as Navy Department liaison officer. Testing range facilities have been provided by the Fleet Marine Force, San Diego Area, and by the Army Service Forces.

Development of the Navy's new ordnance test station at Inyokern has provided additional facilities for close cooperation between the Navy and the Institute rocket group. A Navy press release of August 8, 1944, disclosed details of this world's largest naval ordnance test station, which extends over parts of San Bernardino, Inyo, and Kern counties and covers an area of 815 square miles. At present the primary emphasis at Inyokern is on aircraft ordnance. Testing ranges and other facilities are

constantly being expanded; and under the direction of Captain Sherman E. Burroughs, Jr., Commanding Officer, close cooperation is maintained with the Institute group.

The most recent rocket developments must remain for the present in the realm of military secrets. The magnitude and importance of the work can be seen from the fact that rocket research and development stand almost at the top of the list of manpower and materials priorities, and the Army and Navy are placing rocket production contracts totaling hundreds of millions of dollars.

NEW COMMANDING OFFICER, V-12 UNIT

CAPTAIN WENTWORTH H. OSGOOD, U.S.N. (Ret.), the new commanding officer of Caltech's Navy V-12 training unit, is a naval officer of broad experience. Possessed of as likable personality as his predecessor, Commander E. W. Mantel, Captain Osgood is rapidly becoming as popular on the campus as was the man he succeeded.

A native of Columbus, Ohio, Captain Osgood attended Ohio State University before his appointment to the United States Naval Academy. He was graduated from Annapolis with the class of 1912 and immediately went on active duty. In World War I he was in the destroyer



CAPTAIN WENTWORTH H. OSGOOD

service out of Brest, France. After the war he had various assignments, including the Navy postgraduate schools and the Navy petroleum reserve.

In 1932, Osgood retired with the rank of lieutenant-commander and built a home at 1520 Charlton Road, San Marino, engaging in private business in Los Angeles. He was recalled to duty by the Navy on July 1, 1939, and has served since at Washington and at the advanced naval base in Puerto Rico.

Captain (then Commander) Osgood came to the Institute in October, when Commander Mantel was given an undesignated assignment.

OCTOBER COMMENCEMENT

FIFTEEN HUNDRED persons attended the commencement exercises of the Institute at Pasadena Civic Auditorium October 20, and many more witnessed a colorful parade of V-12 Navy trainees through the streets and watched a review in front of the City Hall.

Receiving Bachelor of Science Degrees and Senior Certificates were 110 undergraduates, while other degrees were awarded as follows: Doctor of Philosophy, 10; Aeronautical Engineer, 1; Civil Engineer, 1; Master of Science in Engineering—Aeronautics, 1; Civil Engineering, 3, and Mechanical Engineering, 4; Master of Science in Science—Geology, 1, Physics, 1.

The invocation and chaplain's address was delivered by the Most Rev. Joseph T. McGucken, S.T.D.

Dr. William B. Munro, Edward S. Harkness professor of history and government, delivered the commencement address on the subject, "The Old Order Changeth . . ." (See Page 3 of this issue).

Candidates were presented by Winchester Jones, associate dean of upper classmen; Dr. William R. Smythe, chairman of the Science Course Committee; and Franklin Thomas, chairman of the Division of Engineering and dean of upper classmen.

The degrees were conferred by Dr. Robert A. Millikan, chairman of the Executive Council, who, in an address on "The Institute and Postwar Defense," said that the old prewar life cannot be recaptured completely when peace comes. He viewed several changes with favor, including the proposed military training of one year for every youth at the completion of high school.

DEATH OF CLYDE WOLFE

Doctor Clyde Wolfe, formerly an instructor at C.I.T. and recently on the staff of the Cyclotron Project at Berkeley, passed away suddenly the latter part of March. He dropped dead apparently from a cerebral hemorrhage. Dr. Wolfe was well liked by members of the staff of the Cyclotron Project and his passing has meant a great loss to his intimates. At the time of his death, he was in line to take charge of a large section of computers on the project.

ATHLETICS

COACH CARL SHY opened Varsity basketball practice on November 8 with a squad of 60 men reporting. After the various cuts, 11 men were retained on the "A" squad and 15 on the "B" squad. All of these men are V-12 trainees.

Included on the "A" squad were six returning letter-men, co-captains, Paul Nieto guard and Hugh West forward, Bernie Wagner and Hal Ball centers, Stuart Bates and Jack Cardall guards. Newcomers are Dennis Ahern from the University of South Carolina and Dick Roeteger forwards, Clarence Woodward center, John Schimenz from University of Kansas and Jerry Schneider guards. All of these men are fast, good shots, and clever ball-handlers, but they lack height.

In the opening game, Tech snowed under a supposedly strong Vultee team 84-36. Coach Shy started West and Bates at forward, Wagner at center, and Nieto and Schimenz at guards. Wagner is the tallest man in this lineup, just topping six feet, but in this game, the fast breaking offense more than offset the lack in height. West and Nieto led the scoring procession with 17 and 16 points apiece, while Woodward and Schneider scored 15 and 14 points each.

A new league consisting of U.C.L.A., Occidental, Pep-

perdine and Caltech has been formed for the basketball season, with each team meeting each other in home-and-home games. All Caltech home games will be played at the State Guard Armory, 145 N. Raymond, which floor is also being used this year for practice. The "B" team, coached by Chief Specialist Gene Mako, plays the preliminary at 6:45 P.M. at all games.

SCHEDULE

Day	Opponent	Place
Friday, Dec. 1	Vultairians	CALTECH
Friday, Dec. 8	U.S.C.	U.S.C.
Saturday, Dec. 9	Santa Ana Army Air Base	Santa Ana
Saturday, Dec. 16	Camp Ross (Wilmington)	Camp Ross
Thursday, Dec. 21	Camp Ross	CALTECH
Friday, Dec. 29	U.C.L.A.	CALTECH
Tuesday, Jan. 2	Los Alamitos Naval Air Station	CALTECH
Friday, Jan. 5	Occidental	Occidental
Saturday, Jan. 6	March Field	March Field
Tuesday, Jan. 9	Pepperdine	CALTECH
Saturday, Jan. 13	Redlands	CALTECH
Tuesday, Jan. 16	U.S.C.	CALTECH
Saturday, Jan. 20	Pepperdine	Pepperdine
Saturday, Jan. 27	Redlands	Redlands
Tuesday, Jan. 30	March Field	CALTECH
Saturday, Feb. 3	U.C.L.A.	U.C.L.A.
Tuesday, Feb. 6	Santa Ana Army Air Base	CALTECH
Friday, Feb. 9	Occidental	CALTECH
Saturday, Feb. 10	San Diego Naval Training Station	San Diego

ALUMNI NEWS

CALTECH ALUMNI MEETING

On the night of November 9, Caltech Alumni and their ladies met at Eaton's Rancho on Ventura Boulevard to enjoy a chicken dinner, which preceded a meeting held at the Walt Disney Studio. Two hundred fifty people were seated in the Banquet Room, after which the party journeyed to the Studio.

Nearly 500 Alumni and friends assembled in the spacious Disney Theatre, where the program of the evening was conducted.

President Harry Farrar gave a short welcoming speech, followed by Bob Bawbell who, in turn, introduced Jacques Roberts, assistant production manager of the Disney organization. Mr. Roberts gave a very interesting and informative talk on production and procedure in the picture business. Following this, three "shorts" were portrayed on the screen, illustrative of their work.

Kenneth Brier, assistant manager of the Disney camera department, gave an interesting talk on techniques of art, color and camera. The party then adjourned to the property room where exhibits were displayed.

NEW YORK CHAPTER

On November 8, the New York Chapter of the Caltech Alumni Association held a dinner and social meeting at the Hotel Holley. Fifty-six members were present, including Dr. Sorenson, Dr. Untereiner and Dr. Houston.

Geoffrey Smith, managing editor of "Flight" and "Autocar" and director of Iliffe Publications of England, spoke on jet and rocket propulsion, giving particular emphasis to the robot bombs now being used against England. He also gave many interesting facts concerning the development of the gas turbine and jet-propelled aircraft.

The officers of the New York Chapter for the coming year are: James A. Davies, '35, president; Clyde R. Keith, '22, vice-president; Evan A. Johnson, '38, secretary-treasurer; George S. Lufkin, '29, director; Clifford Burton, '40, director; Harry St. Clair, '20, ex-officio president.