





CHAPLAIN'S MESSAGE

The Purpose Of it All

By CHAPLAIN ROBERT FENNING



Last year the press reported that a well-known New York preacher was all for surrendering Christmas to the secular interests that seemed to know more than he did what the holiday was really for.

It is strange that a story so simple and beautiful in its inception could mushroom into the complex institution it has become.

The following bit of satire appeared in THE SATURDAY REVIEW and is quoted in Bishop Gerald Kennedy's Notebook: "Last night John Elzy, watchman at the Grand Eagle Department Store, while making his rounds of the bargain basement, found the body of a man lying under a counter.

How can we know the meaning of Christmas unless we are willing to turn to the source of Christmas? The Scriptures, not the opinions of men, can help us rediscover the warmth and wonder of this time.

SecNav Note Emphasizes Need For Greater Thrift

Following is a note from Secretary of the Navy Paul Nitze on goods management and economical administration in the Department of the Navy:

"In recent public statements and in meetings with the heads of departments and agencies, the President has stressed the need for greater thrift and frugality in the government. Accordingly, the Secretary of Defense has directed all elements of the Department of Defense, military and civilian, to take vigorous action to improve management and achieve economies.

reason to be proud of its many recent achievements in management improvement. But we cannot rest on past accomplishments. There are as many savings to be made in the future as have ever been made in the past.

"I should like to emphasize to everyone in the Department of the Navy that we have a prime obligation to support the President and the Secretary of Defense in their efforts to get a dollar's value for a dollar spent.

"The Department of Defense cost reduction program has already achieved substantial savings without diminishing our strength or fighting effectiveness. Our effort must now be directed not only to meeting the target already established for the future but to go beyond it.

"In his letter to heads of departments dated 30 November 1963, the President wrote that 'the Federal Government has

PROMOTIONAL OPPORTUNITIES

Present Station employees are encouraged to apply for the positions listed below. Applications should be accompanied by an up-to-date Form 58. The fact that positions are advertised here does not preclude the use of other means to fill these vacancies.

Budget Analyst (one vacancy), GS-9 or GS-11, Code 1731 - Incumbent has responsibility for providing staff budget support for two technical departments on the Station; such as knowledge of appropriations for their departments, programs, etc.

File applications for above with Janet Thomas, Bldg. 34, Room 28, Phone 71648. Supervisory General Engineer, GS-13 or GS-14, Code 4033 - As Head, Advanced Systems Branch, Air-to-Surface Weapons Division, directs the efforts of the Branch in (1) appraising the needs of the Navy and Marine Corps for new conventional weapons, formulating a program to meet these needs and carrying out a development program to implement this formulation and (2) development of weapons programming systems (fuzing) for a wide variety of Station-developed weapons.

Clerk-DMT, GS-4, PD 140172, Code 4022 - Provides clerical for members of Analysis Branch and Guided Missile Division; types correspondence, notes, project plans and reports from either material dictated on a transcribing machine or from rough draft. Logs and files various operating documents and material, operates various reproduction machines and performs general office-clerical duties.

File applications for above with Pat Delling, Bldg. 34, Room 28, Phone 71577. Deadline for filing is Dec. 27.

Secretary (typing), GS-4, P.D. 19696 AMI-A, Code 554 - Secretary to the Head, Manufacturing Division, Engineering Dept. The incumbent is solely responsible for all secretarial and clerical duties as it is necessary to assist him in the efficient operation of his division and relieve him of all duties of a routine nature.

File applications for above with Dora Childers, Bldg. 34, Room 32, Phone 71593 or 72022. Deadline for filing is Dec. 31.

COMPETITIVE EXAMS Planner and Estimator (Public Works), \$3,98, \$4.15, \$4.32 per hour, Pasadena, Calif. File Card Form NAVEXOS-4155-AB and Standard Form 57 with the Personnel Division, Code P-659, Pasadena, Calif., no later than Dec. 30.

Head, Truck Driver (Heavy), \$6718.40, \$6988.80, \$7299.20 per annum, China Lake, Calif. File Card Form NAVEXOS-4155-AB and Standard Form 57 with the Detached Representative, Board of Examiners, 11ND, China Lake, Calif., no later than Dec. 30.

Chief Quartermaster (Transportation Equipment Operations), \$8278.40, \$8632.00, \$8958.60 p.a., U. S. Naval Air Station, Quonset Point, Rhode Island.

File Standard Form 57, Card Form NAVEXOS 4155-AB with the Industrial Relations Officer, U. S. Naval Air Station, Quonset Point, Rhode Island, no later than the close of business on Jan. 9, 1964.

Credit Union to Close Dec. 24 Through Jan. 2

In order to calculate and post 1963 dividends and accomplish system change-over to IBM computer program, the NOTS Employees Federal Credit Union office will be closed to all transactions from 1 p.m. Dec. 24, 1963 through Jan. 2, 1964.

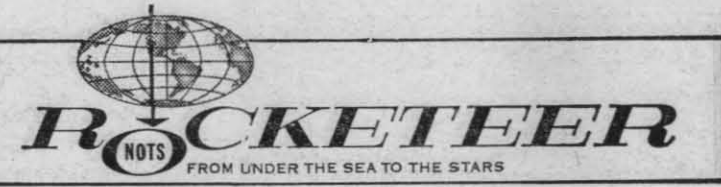
Annual Meeting, Jan. 7 Annual membership meeting will be held at the Community Center, 8 p.m., Jan. 7, 1964. The agenda will consist of announcement of 1963 dividends, the annual report, and election of officers.

The Rocketeer

Official Weekly Publication of the U. S. Naval Ordnance Test Station China Lake, California. Captain Charles Blinnman, Jr., USN Station Commander. "I. T. T." Bibby Public Information Officer. Jack G. Broward Editorial Advisor. Richard Grueneberg Editor. Budd Gott Associate Editor. Frederick L. Richards Special Assignments. DEADLINES: News Stories - Tues., 4:30 p.m. Photographs - Tues., 11:30 a.m. The Rocketeer receives Armed Forces Press Service material. All are official U. S. Navy notes unless otherwise identified. Printed weekly with appropriated funds in compliance with NavExos P-35, Revised July 1959. Office: 50 King St., Bldg. 00929. Phones - 71354, 71655, 72082.

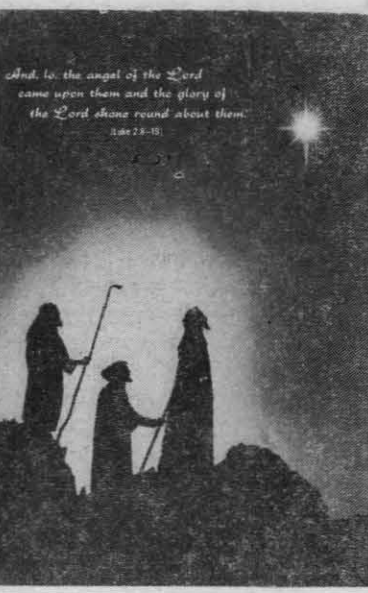


Christion Science (Chapel Annex) Morning Service-11 a.m. Sunday School-11 a.m. Protestants (All Faith Chapel) Morning Worship-8:30 and 11 a.m. Sunday School-9:30 a.m., Groves and Richmond elementary schools. Roman Catholic (All Faith Chapel) Holy Mass-7, 9:30 a.m., and 12:30, 5:30 p.m. Sunday. 6 a.m. Monday through Friday, 8:30 a.m. Saturday. Confessions-8 to 8:25 a.m., 6 to 8:30 p.m. Saturday, Thursday before First Friday-4 to 5:30 p.m. NOTS Hebrew Services (East Wing All Faith Chapel) Every first and third Friday, 8:15 p.m. Sabbath School every Saturday morning. Unitarian Fellowship (Parish Hall) Fellowship Meeting - Sundays, 7:30 p.m. Sunday School - 9:30 a.m.



Naval Ordnance Test Station, China Lake, California Vol. XVIII, No. 50 Friday, December 20, 1963

About The Cover



For hundreds of years the shepherd scene has been a Christmas classic. Luke tells in the Bible about that first glorious night nearly 2000 years ago as the shepherds were awed by the heavenly voice. They stood in rocky desert terrain between Nazareth and Bethlehem, terrain very much like this in the Mojave Desert. Thus, on our cover today, we offer a photographic re-enactment. The picture was taken on a hilltop south of Trona Road about six miles east of the U. S. Naval Ordnance Test Station's south gate. Navy Photographer Lee Mascarello, PH2, used Tri-X film in a 4x5 Speed Graphic, exposing at 1/100th of a second at f. 32 shortly before sunset. No filter was used. The art work was done by Dick Johnsen of TID.

New Income Tax Orders Issued For Servicemen

(From Navy Times)

WASHINGTON—A recent Bureau of the Budget circular has ordered the services to send a man's W-2 statement of earnings form every January to his home state as part of the tax co-operation between the federal and state governments. The states can use the forms to check up on men who have not been paying taxes.

Those who have "inadvertently failed to take cognizance of the income laws in their domicile," as one Navy lawyer put it, may face payment of past years' taxes plus penalties.

Sixteen of the states do not have income tax laws or do not tax servicemen's income. And men overseas are not affected by the order, BuBud Circular A-38.

Before the 1963 tax year, the withholding forms went only to the state where men were stationed. Payment could be avoided by stating your permanent home, or domicile, was in another state.

Now the forms will go to the state — and city if it taxes income — the man has put on his records as his permanent home. If he has not made a choice W-2s will go to the state where he's stationed.

If a domicile choice has not been made, the legal official said, "our best advice is for him to see his local legal assistance officer."

A serviceman can also switch his domicile if he wants to with the aid of his legal assistance officer. But this is sometimes tricky and it probably won't be long until all states have income taxes anyway, experts say. (Too, he might lose out on veteran bonuses, voting rights, home state tuition charges and

Project Management Seminar Rescheduled

Management E, the Project Management Seminar originally scheduled to begin Jan. 6 has been rescheduled to start on Jan. 28, the Employee Development and Education Division announces.

The class will meet Tuesdays, from 2:30 to 4:30 p.m., for 12 weeks in Room 205, Training Bldg. It will be coordinated by Ken Heyhoe, Associate Head of

other parts of the "big picture," they said.)

The Navy Judge Advocate General officer reminded that the Soldiers and Sailors Relief Act does not relieve servicemen from paying all taxes — only taxes resulting from his presence in a place because of military orders. It merely keeps him from losing citizenship in his home state because the military orders bring to another one. The act does exempt him from some taxes in the state where he's stationed but not from home state taxes.

His family is not relieved by the act from taxes in the state where he is based, in most instances. Practically every question has to be answered on an individual basis. But the first step is to get a domicile on the records.

The fourteen states without income taxes are Connecticut, Florida, Illinois, Maine, Michigan, Nebraska, Nevada, Ohio, Pennsylvania, Rhode Island, South Dakota, Texas, Washington and Wyoming. In addition, neither Tennessee nor New Hampshire taxes service income.

"A full discussion of the situation is carried by the November issue of the Navy Judge Advocate General Journal. A member of the tax rulings division of the Internal Revenue Service, Army Reserve Capt. Rudolph M. Planert, has details in his article, "Federal-State Co-operation and Its Significance to Servicemen."

RIM SHOTS

By BILL VALENTEEN



Man, this year really flew by! It doesn't seem like very long ago that I first began to write this column.

A lot of wild things happened this past year in the Sports' world. I hate to start mentioning the more important achievements during the year for fear of having the Giants winning the pennant again!

It is important to reflect, however, that even though tremendous records have been set in the past, we are still not completely surprised to see them broken, and we shall expect to see them broken further in the future. And, did you ever stop to realize that breaking a record today, means that the person doing it is greater at that one particular thing than anyone who ever lived in the history of our civilization?

NAVY VS. TEXAS IS A BIG ONE

And, this year isn't over yet. There is still quite a bit of activity going on, particularly in preparation for the New Year's Day Bowl games.

Probably the most interesting contest that we'll be able to watch on New Year's Day is the Cotton Bowl game which this year will pit the University of Texas—No. 1 team in the nation, the only major club to remain untied and undefeated—against the mighty middies of Navy. The Academy boys don't have to take a back seat to anybody, even though they were knocked off by a fired up SMU team back in the beginning of the season. I look for Navy to beat Texas, and I think they will.

THANKS FOR THE COMMENTS

Since this is the last issue of the Rocketeer for the 1963 season, I'd like to take this opportunity to thank all of you who have been so kind in commenting to me personally about your observations of this column. It's very rewarding to know that you do read what is said, and more than that, that I have the opportunity to tell you what I think, and that you are interested. I've had a lot of fun researching new and unusual aspects of the sports' spectrum in order that I could provide you with interesting sidelights that I thought you would enjoy. And I have experienced quite an education about sports that I would never have taken the time to acquire otherwise.

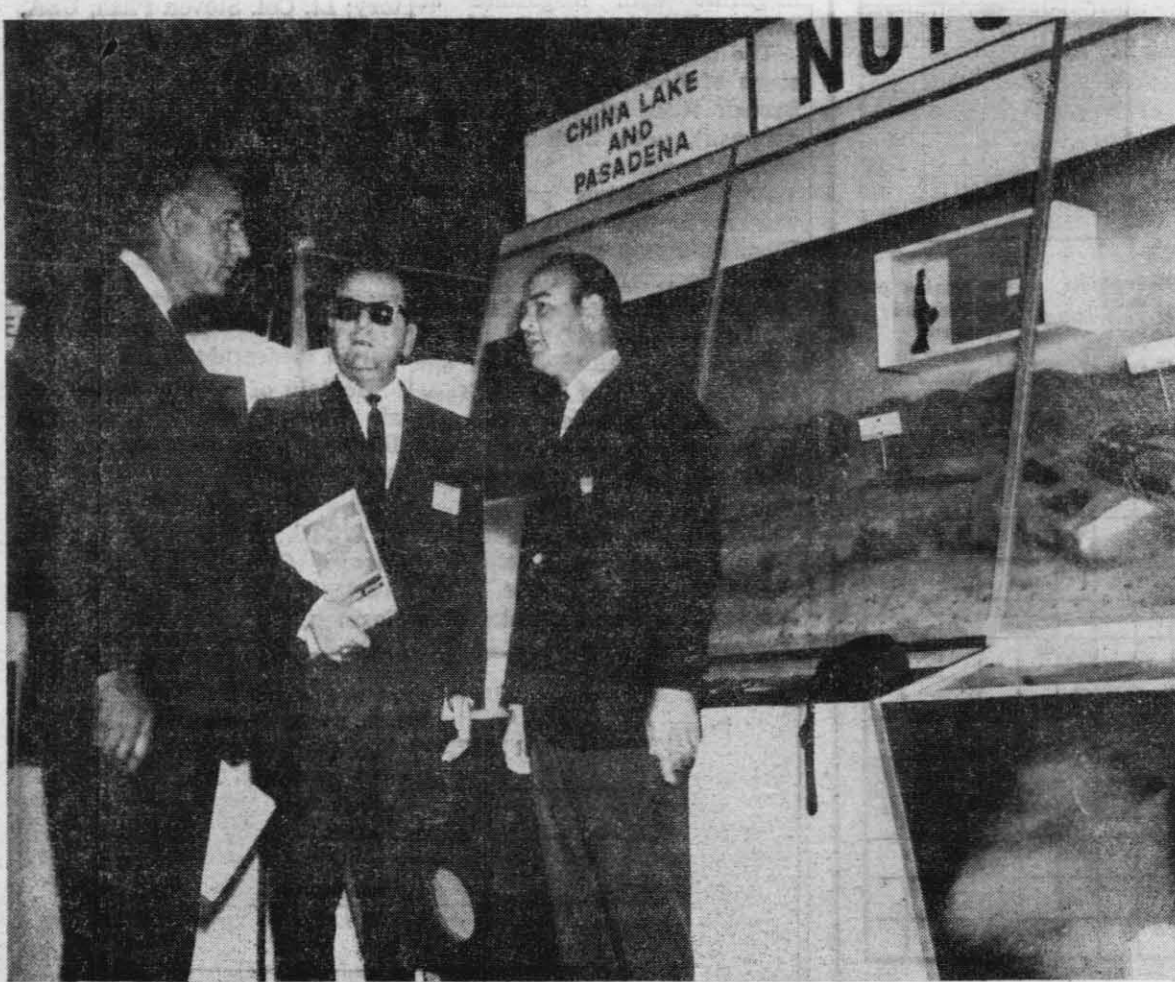
In the future, however, I'd like you all to feel that you can count on me for a personal treatment about your local situation, and for you to feel free to call me regarding just that kind of thing.

There are a lot of things that go on around the area that would make very interesting reading to a lot of people—but, if I don't know about it, I can't do anything for you, can I?

BEST WISHES FROM THE FAMILY

Well, anyway, we've got a great year to be anxious about in 1964, and I'd just like to say that I wish you the very best that it can offer, both in general as well as personal treasure, and I'm sure you'll make the most of it when it comes your way. My wife, Therese, my daughters, Susan and Celene, all join me in wishing you a very nice Christmas season, and that you will have many, many more good years to remember.

Keep smilin', Sport! See you next year!



BILL VALENTEEN (right) of TID, and Rocketeer sports columnist, answers questions of Gov. Paul Fannin of Arizona (left) and Gov.

Luis Encinas of the State of Sonora, Republic of Mexico, during their visit to NOTS' exhibit at recent Arizona State Fair in Phoenix.

TV Bowling Stars Matched Against Local Keglers Sat.

Station bowlers are in for a real treat tomorrow morning when television bowling stars George (Spook) Berry and Larry Lake will put on an exhibition at 10 o'clock at the Anchorage Alleys.

Opposing Berry and Lake in a three game match will be two of the Station's top bowlers, Earle Roby and Ken Dalpiaz.

"Spook" Berry, who represents the Brunswick Co., carries a 212 average. He has an 837 series and has bowled three 300 games.

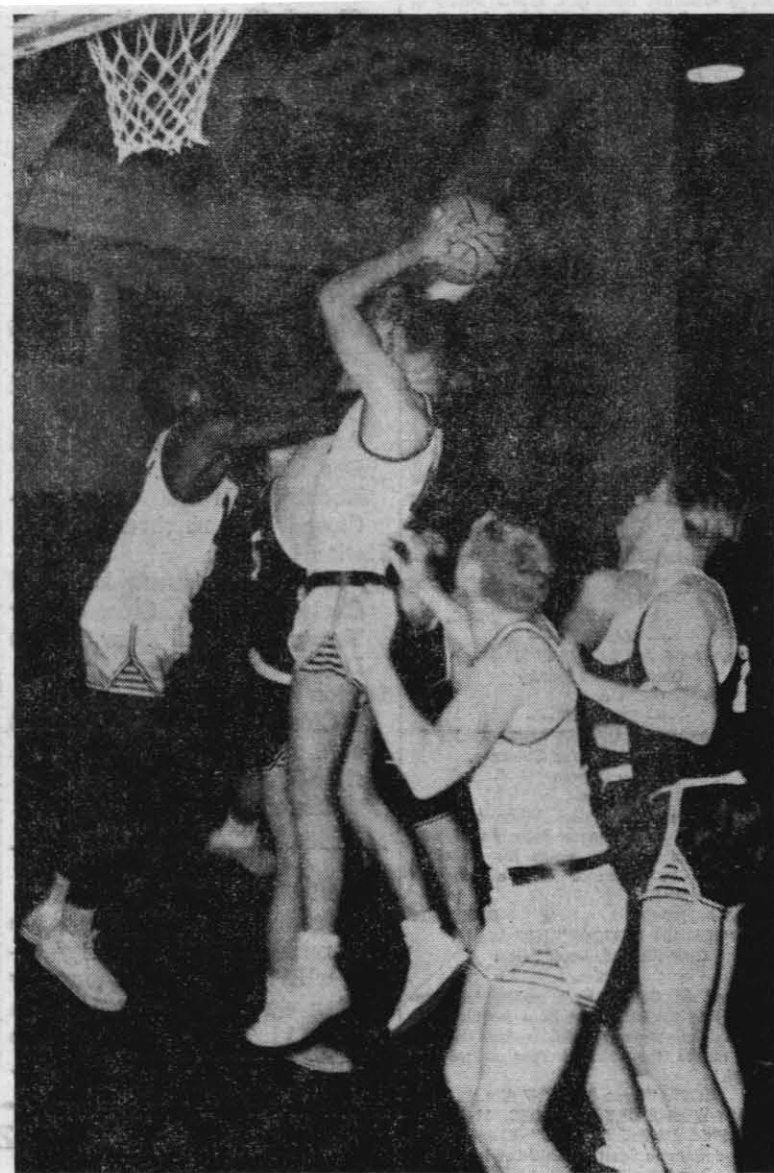
Larry Lake carries a 209 average. He has an 802 series to his credit and has bowled two 300 games.

Earle Roby has a 184 average while 20-year-old Ken Dalpiaz has a 183 average.

Jr. Archers Tourney Slated for Tomorrow

The China Lake Junior Archers 11th annual tournament is slated to begin tomorrow at 1 p.m. at the Junior Archery Range, 57-B Rowe St.

The tournament is open to bowmen in the 9-11 and 12-15 year age group.



SEAMAN GUARD'S James and Turner smother Aero Science's Gary Hucek as they go after a rebound in Tuesday night's play while Seaman Guard's Webster (light jersey) and Aero Science's Lane and Short (dark jerseys) await outcome of tussle. Aero Science swamped the Seaman Guard 142 to 35. In Tuesday night's first game VX-5 squeaked by AOD 50 to 48.

Bowling Standings Premier League

Table with 3 columns: Team, Won, Lost. Rows include Station Restaurant, Desert Playhouse, Cousins, Apes, Roadrunners, CPO Club, and High team, 3 games — Desert Playhouse, 2840; High Individual, 3 games — Jim Peck, 638; High Team Game — Desert Playhouse, 1072; High Individual Game — Earle Roby, 268.

The 30 Club

Table with 3 columns: Team, Won, Lost. Rows include Unpredictables, V. Smith Chevron, Just Missed, Easy Marks, Quints, Twisting Poodles, High Team, 3 games — Unpredictables, 2343; High Individual, 3 games — Nan Carroll, 569; High Team Game — Unpredictables, 895; High Individual Game — Irish Miner, 226.

SPORTS QUIZ

- 1. From 1889 through 1955 Notre Dame had only one losing football season. What year was it? 2. What is the record for the most points scored in a football game by one player? 3. What were the most yards ever gained on one play by one runner in a football game? 4. Who owned the international racing sloop Shamrock?

(Answers to Quiz)

- 1. 1937. 2. Joe Kershall of West Liberty State scored 11 touchdowns and kicked five extra points for a total of 71 points in a game against Cedarville in 1937. 3. Willis Terry of Yale scored 176 yards long instead of the pre-1884 football fields were 110 yards long. 4. Sir Thomas Lipton.



# Carolers Are On the Way

Members of the Christmas Choir, under the direction of Merton Welch, made their first appearance this season on Thursday, December 19, when they sang at the Long Beach Veterans Hospital.

On Tuesday, December 24, the strolling carolers will appear at Foothill and Morris Dam as follows:

- 8:15-8:45 a.m. — Supply Area.
- 9:00-9:30 a.m. — Bldg. 7 Machine Shop.
- 9:45-10:15 a.m. — Coffee Port.
- 11:30-12:00 Noon — Morris Dam.



CAROLERS—NOTS' Pasadena Christmas Choir will present its program of holiday season music at Foothill and Morris Dam.

## Ens. Blake Relieving Lt. (jg) Galligan at SC



ENS. G. J. BLAKE



LT. (jg) J. D. GALLIGAN

Ensign Gerald J. Blake has reported aboard to relieve Lt. (jg) James D. Galligan as Assistant Resident Officer in Charge of Construction, San Clemente Island.

Ensign Blake comes to NOTS Pasadena from duty with Civil Engineer Corps Officer School, Port Huemene.

Originally from Dayton, Ohio, he entered the Service in May 1963 at Newport, R. I., Officer Candidate School. Graduating in September, he then went to his Port Huemene post.

He is a graduate of the University of Dayton, holds a Bachelor of Civil Engineering Degree.

Lt. (jg) Galligan leaves today for duty with Mobile Construction Battalion Four, Davisville, R. I., and will shortly be going to Spain.

He came to NOTS in September 1962 for his first tour of duty after receiving his commission through the Reserve Officer Candidate Program (ROC).

Born in Portland, Ore., he attended Oregon State University and holds a Bachelor of Science degree in Engineering.

# NOTS Pasadena

VIRGINIA E. LIBBY — EXT. 638

## Christmas Message

To all of you and your families, we extend warmest wishes for a joyous Christmas and a happy successful New Year.

The old familiar refrain "Peace On Earth to Men of Good Will" has deep meaning to all of us whose daily efforts are directed toward maintaining that peace. Your dedication, competence, and cooperative efforts during this past year have contributed to fulfilling our Navy's mission to defend our country.

We look forward with much pride to serving with you during the coming New Year.

D. J. WILCOX                      Capt. G. H. LOWE  
Head, Underwater Ordnance Dept.      Officer in Charge

## PROMOTIONAL OPPORTUNITIES

### PASADENA

To apply for vacancies, contact Nancy Reardon, Pasadena Personnel Division, Extension 492. A current SF-58 must be submitted when applying.

**Electronic Technician (Instrumentation), GS-11, PD 1P80117, Code P8084, Duty Station: Long Beach.** Incumbent does development, modification, and installation of electronic instrumentation and servo mechanisms for experimental and development testing of ordnance items at the Long Beach Sea Range. In addition, he is responsible for range operations for assigned test projects.

**Machinist; Hourly Salary Range: \$3.19 to \$3.45; Code P8094** — Sets up and operates various machine tools including lathes, boring mills, milling machines, precision grinding machines, shapers, etc. Works to close tolerances. Does precision fitting, finishing, and assembling of machined parts.

## Recent Visitors Die in Air Crash

Pasadenans were saddened this week with the news of a fatal accident befalling two recent visitors — Dr. J. H. Mole and I. A. Gatenby, both of the Admiralty Underwater Weapons Establishment, Portland, England.

Though all the details are not known, word received here was that they were victims of a plane crash — small single-engine aircraft — while en route from Washington, D. C., to Pennsylvania.

The accident occurred on December 10.

Dr. Mole and Mr. Gatenby had visited at NOTS Pasadena on November 26.

## Edgar T. Hurst Retiring After 26 Yrs. Service



EDGAR T. HURST

After 26 years of federal service, Edgar T. Hurst is retiring. Today is his last day at NOTS Pasadena. He has been with NOTS 14 years.

With Public Works' Maintenance Division, Hurst heads the Planning and Estimating Branch. He first entered Civil Service in 1941 at the Mare Island Naval Shipyard, later transferring to the Long Beach Naval Shipyard. He joined NOTS in January 1950.

Hurst served in the U.S. Navy during 1914-1918.

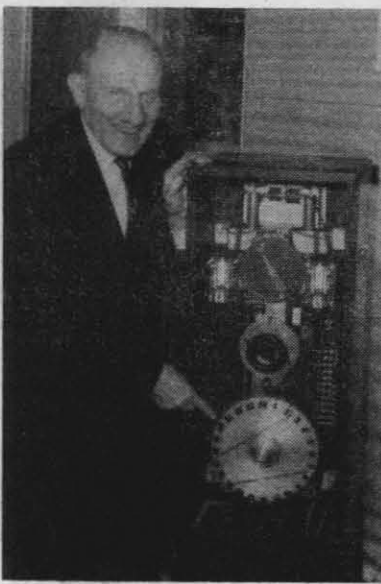
He and his wife, Mary, have lived in Burbank for the past 23 years. They have two sons, both married, who have provided the Hursts with eight grandchildren.

Hurst reports the future is well planned by his wife. Besides spending time with the grandchildren, he will devote his time to managing their apartments and business property.

## Lots of Snip

Scissors have more uses than cutting red tape—one use being as a component of medical kits for Civil Defense. In FY 1963 the Defense General Supply Center, Richmond, Va., purchased over one-half million pairs of 4-inch picket scissors. If placed end to end, these scissors would extend more than 35 miles.

## 'Retired' Chimes Donated to Maturango Museum



ELMER PRICE tells history of chimes.

Nothing quite epitomizes the history of NOTS Pasadena Annex, and its parade over the years of distinguished scientists and engineers, as the chimes which ceased sounding their melody on Nov. 1st to make way for progress in the form of the modern Centrex System installed at the Foothill Laboratory.

On its way to the faceless limbo of "surplus" and probable cannibalism of its parts, it was retrieved in the nick of time and is now on its way to China Lake to represent a phase of Pasadena history in the Maturango Museum.

In a forwarding letter to Captain Charles Blenman, Jr., Captain G. H. Lowe, Officer in Charge, Pasadena Annex, relates the history of the chimes

as told by Elmer P. Price who says:

"It is believed fitting that this unique object be preserved and identified as the 'John Sandige Memorial Chimes' in honor of the clever, brilliant, and likeable late Cal-Tech electrical engineer.

"At the request of the Officer in Charge, in 1945 he conceived, built, and installed this charming device as well as another since dismantled, for the NOTS Green Street offices. The sweet tones of the chimes, rather than some startling sound, were set to remind the dedicated employees of starting and ending of the work day, lunch periods, and coffee breaks.

Memory Still Alive  
"The memory of John Sandige

is still very much alive with old-timers at Pasadena such as Bob Leard, Jim Taylor, Phil Foster, and Ken Sherman, and at the Green Street office with Louis Forteville. An inventive genius, John Sandige was also blessed with a keen sense of humor and practicality, to go with the dreamer aspect of the man.

"His retirement dinner was attended by a host of admirers and was marked by a brief farewell salute to NOTS and an invitation to visit him at the new home he was about to build in Oregon with gadgets of pleasurable utility. Alas, just as the home was completed, Mr. Sandige was the victim of a fatal heart attack.

"His many friends are happy that his chimes will live on."



## Schedule of Christmas Services

### ALL FAITH CHAPEL

#### PROTESTANT:

- Sunday, December 22  
Children's Christmas Service ..... 7 p.m.
- Christmas Eve, December 24  
Family Candlelight Service ..... 7 p.m.
- Christmas Day, December 25  
Christmas Morning Worship ..... 10 a.m.

#### CATHOLIC:

##### Mass Schedule

- Sunday, Dec. 22—7 a.m., 9:30 a.m. (Children's Communion), 12:30 p.m. and 5:30 p.m.
- Tuesday, Dec. 24—11:30 p.m. — Singing of Christmas Carols by Congregation. Midnight Mass.
- Wednesday, Dec. 25—5:00, 5:30, 6:30, 7:00, 7:30, 8:00, 8:30 and 9:00 a.m.; 12 Noon and 12:30 p.m.
- Confession Schedule  
Monday, Dec. 23—4:00 to 6:00 p.m., and 7:30 and 9:00 p.m.
- Tuesday, Dec. 24—10:00 a.m. to 12 Noon and 3:00 to 6:00 p.m.

#### HEBREW SERVICES:

(East Wing of All Faith Chapel)

Friday night services at 8:15 sharp, Dec. 20.

## Acey-Deucey Club To Host 50 Children At Christmas Party

Christmas will be a little brighter for approximately 50 children enrolled in special education classes in the Indian Wells Valley schools when the Acey-Deucey Club hosts a special Christmas Party for them on Sunday, Dec. 22, from 1 to 3 p.m.

Santa will arrive at the Club via fire truck at 1 p.m. He will distribute a gift to every child in attendance.

Following distribution of gifts, a work force of Club members will serve the children ice cream and cake.

## Holiday Greetings From CincPacFlt Adm. U. S. G. Sharp

"One again as the holiday season approaches, we are reminded of the special meaning of Christmas. To all of us, it is a time of religious significance as well as a time for remembrance and celebration.

"The holiday season is traditionally known as a time of 'Peace and good will toward men.' You, the officers, men and women, both Navy and Marine Corps, of the Pacific Fleet have contributed in large measure toward maintaining peace throughout the world by your devotion to duty, courage, and personal sacrifice. Let us hope and pray that during the coming year all mankind will display the patience and forbearance so necessary to the development of charity and brotherhood between nations.

"To all of you, your families and loved ones, I extend my best wishes for a blessed Christmas and a peaceful and prosperous New Year."

Adm. U. S. G. Sharp  
CincPacFlt

## Final Issue For 1963

This is the final edition of the Rocketeer for 1963.

Publication will be resumed on Jan. 10, 1964.

A very Merry Christmas and Happy New Year.

The Staff



- TOMATO JUICE COCKTAIL      CREAM OF PEA SOUP
- SALTINES
- ROAST YOUNG TURKEY      OVEN ROAST BEEF
- NATURAL BEEF GRAVY
- CRANBERRY SAUCE
- SWEET POTATOES SUPREME      SNOW FLAKE POTATOES
- BUTTERED ASPARAGUS      INDIVIDUAL SALADS
- SALAD BAR      RIPE AND GREEN OLIVES
- MILK      TEA      COFFEE
- HOT PARKER HOUSE ROLLS
- ASSORTED BREADS
- STRAWBERRY PIE      FRUIT CAKE      ICE CREAM
- MIXED CANDY      MIXED NUTS
- CIGARETTES



GOOD OL' ST. NICK got plenty of orders for Christmas dollies and choo-choo trains when he visited the Navy Exchange Child Care Center last Wednesday. Santa and the young-

sters had such a good time that he came back Thursday, and he'll be there today and also at the Christmas party beginning at 11:45 a.m. Monday.



## Holiday Message

It has been a memorable year for the NOTS family. A year of mutual achievements providing us with pride in the thought that we have contributed to the ultimate goal of peace on Earth.

Our hard work and achievements gained national recognition this year through the visit of our Commander-in-Chief. We were then saddened, as was the nation, with the great loss of our leader. Our future plans must be dedicated to the ideals for which he stood.

With these thoughts in mind we wish to extend our warmest wishes for a happy holiday season, and may we enter the new year with a renewed dedication to persevere in the tasks that lie ahead.

CHARLES BLENNAN, JR.  
Captain, USN  
Commander, NOTS

WM. B. McLEAN  
Technical Director

## Unitarians Slate Yule Program Monday

The legend of the Nativity will be told in readings following a potluck dinner to be held by members of the Unitarian Fellowship of the Indian Wells Valley at 5:30 p.m., Monday, in the East Wing of the All Faith Chapel.

Members planning to attend the dinner are asked to call Elaine Howell, FR 5-2193.

## Greetings From SecNav

We have once again reached that time of year when we commemorate the birth of Him whose life was so dedicated to the premise of peace on earth to men of good will.

Christmas will once again find some of our sailors and marines separated from loved ones, either on cold and lonely watches in the far corners of the world, or on ships at sea or in aircraft on patrol. All can be proud that together we work toward that day when all men, everywhere, will live in mutual respect and understanding, when the twin ideals of Christian charity and the brotherhood of man will be among the guiding principles of the world, and when the future of mankind will not rest upon the whim of men who profess no God.

To all members of the Navy family, in uniform and out, I offer heartiest Christmas greetings and sincere best wishes for a happy and peaceful 1964.

Paul H. Nitze  
Secretary of the Navy

## COM New Year's Eve Ball, Tots' Yule Party Set

Ring out the old, ring in the new, at the Commissioned Officers Mess New Year's Eve Ball!

All club members and their guests will receive noisemakers, hats and favors. A buffet dinner will be served from 7 to 10 p.m. The price per person is \$3.00. Please call 72265 or 72268 by 5 p.m., Dec. 30, for reservations.

The COM Children's Christmas Party will be held on Sunday, Dec. 22, from 5 to 7 p.m. Don't forget to bring your child's gift with his or her own name on it. Santa Claus will distribute the presents.

## Santa Here Tomorrow

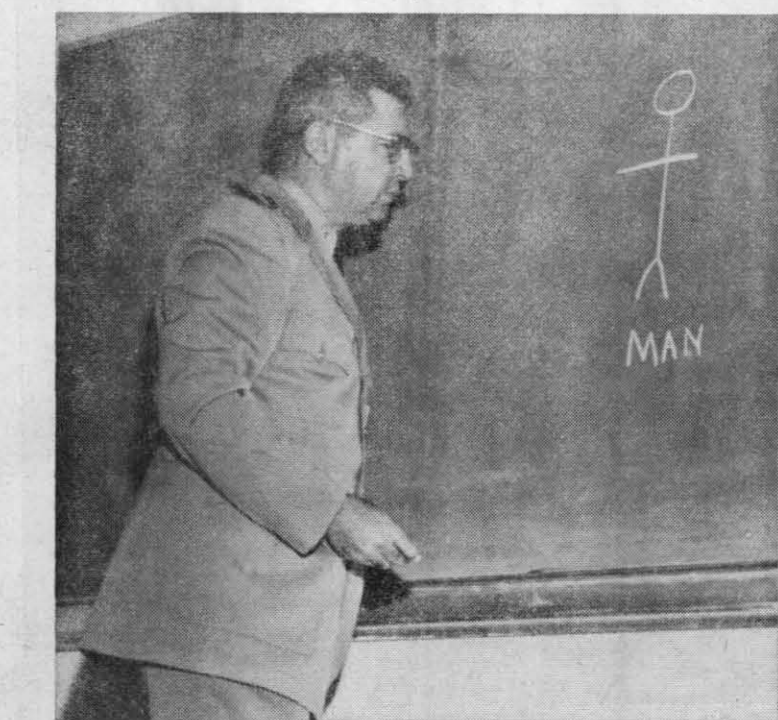
Don't forget, kids, Santa Claus will appear tomorrow throughout the China Lake and Ridgecrest community. He'll be riding on a fire truck, distributing candy to youngsters.



NOTS' Senior Medical Officer

Sees Link-up Between Physical Sciences, Biological Research

A link-up between biological research and the physical sciences in which NOTS is engaged (in its weapons research and development programs) has been envisioned by a China Lake Navy physician who recently returned from the Navy's first Biological Sciences Research Workshop.



DR. R. B. SPEAKER AND 'MAN' From the Blackboard to Real Solutions is a Path Punctuated with Unknown Factors, But Science Is Gaining Steadily.

oratory audience that "acceptance of biological research and its applications within our NOTS programs is a natural evolution."

He reviewed some 30 papers in capsule form which were presented at the recently concluded Workshop, representing the findings of key research facilities throughout the Navy.

Dr. Speaker noted the relationship which exists between a number of programs conducted here and those in which biological research had been carried out.

Underwater Findings Told

He made specific reference to the underwater weapons research and development programs in reporting the findings of the Navy's Applied Science Laboratory, Brooklyn, N. Y. in a study conducted by that facility on Marine Fouling.

"Several of our major programs here at NOTS, related to deep sea weapons and vehicles, will ultimately succeed or fail on the basis of the environment to which they are exposed," he said.

Face Unknown Factors

"The big problem facing physical scientists today are the

vast, unknown factors represented in the environments of outer and inner space," he noted.

Though he has worked to a limited degree with local scientists in thermal programs, Dr. Speaker commented that "little information of practical, long range value has been extracted from our work."

"For instance, how severely must a human be burned—as a result of a NOTS produced

that a dual value of algae—food and oxygen production—have been extracted by biological research scientists.

Of particular significance in the areas of undersea weapons and communications, is the recent discovery and identification of a "sonic plume" by the Navy Electronic Laboratory. The community of sea organisms which floats at a level beneath the ocean's surface possesses characteristics which change abruptly when the water is disturbed by, for example, a submerged submarine.

"This project has rich possibilities in relation to our anti-submarine warfare programs, in addition to many related projects."

Held At Bethesda

The Workshop was held Oct. 14-18, at the Naval Medical Research Institute at Bethesda, Md., under the sponsorship of the Office of Naval Research.

Roger D. Reid, Director of the Biological Sciences Division, ONR, pointed out that, "Too often biologists working in and for the Navy, do so in scientific isolation."

"They do not have adequate acquaintances among or communications with their scientific counterparts in other Navy laboratories."

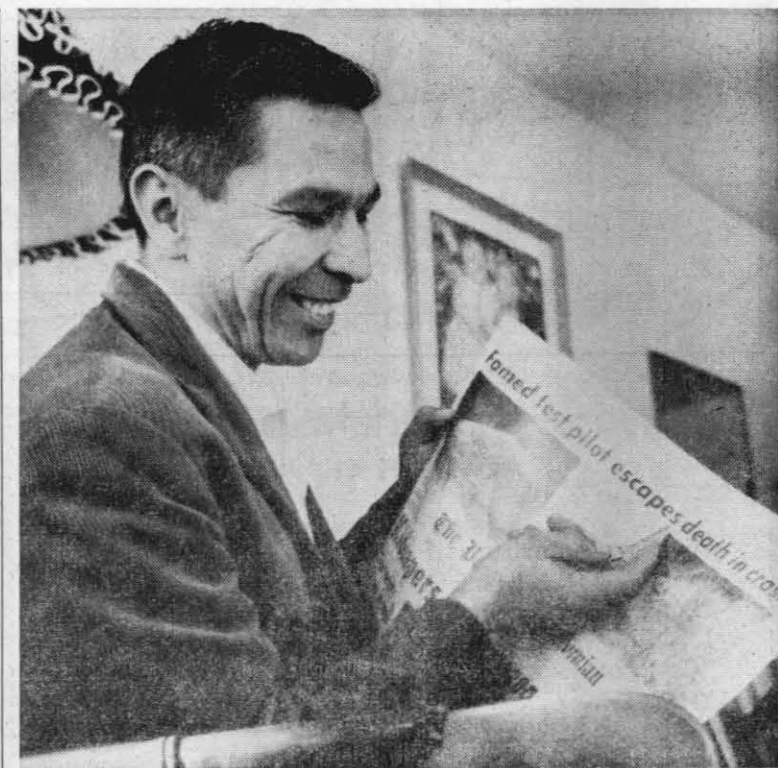
"Profitable cross-fertilization of ideas and concepts is lacking. We trust that this is but the first of a long series of Workshops designed to keep our Navy biologically (scientifically) strong."

Dr. Speaker noted that next year's Workshop is scheduled during October at the Pensacola School of Aviation Medicine. He strongly urged that local representation be arranged at that session.

He said copies of papers presented on the following topics could be obtained by scientific personnel by writing: Helen Hayes, Office of Naval Research, Washington, D. C.

Asks For Knife

Yeager, America's first flyer



CHINA LAKE'S Thomas Garcia aided in rescue of famed Col. Chuck Yeager, used pen-knife to cut flyer's flight suit.

NOTS Man was First To Aid Downed Yeager

A China Lake man called on World War II experiences in helping rescue downed flyers last week in rushing to the aid of one of America's most famous aviators.

Thomas Garcia, a photographer attached to Propulsion Development department, said his actions in aiding Air Force Colonel Chuck Yeager, were "instinctive."

Based at Edwards Air Force Base, the famed test pilot was flying an experimental, rocket-boosted NF-104 at 90,000 feet when he lost control of the craft.

"I was on my way to Los Angeles, just approaching the intersection of Highways 6 and 466 when I saw the plane dive into the ground and burst into flames about a mile off the highway," recalled Garcia.

"I saw Col. Yeager's parachute land and turned my car off onto a dirt road leading to the scene. I was able to drive part of the way but had to run about a half mile because of the rough terrain."

to pass through the speed of sound, was kneeling down, rubbing his head when Garcia reached the scene.

"He asked me if I had a knife. The left side of his face was blackened by fire and his left glove had also been burned, causing the leather to shrink," Garcia continued.

"I carry a small pen-knife with me and was able to slice the seams of his high altitude suit, then cut the glove off his hand."

Regains Composure

"He seemed to be in a slight state of shock at first, but within minutes, regained full composure," noted Garcia, adding that his initial concern was that Yeager's chute might drag him across the desert floor.

"I determined that Col. Yeager had not been injured in his ejection, but insisted that he not be moved until an Air Force (Continued on Page 8)

Research Papers Available

- STUDIES IN MAMMALIAN TEMPERATURE REGULATION - R. D. Squires and F. H. Jacobson, Aviation Medical Acceleration Laboratory, U. S. Naval Air Development Center, Johnsville, Pennsylvania.
THE PHYSIOLOGICAL REGULATION OF HUMAN BODY TEMPERATURE - T. H. Benzinger, Bio-Energetics Laboratories, Naval Medical Research Institute, Bethesda, Maryland.
VIBRATION AND BIOMECHANICS - David E. Goldman, CDR, MSC, USN, Biophysics Division, Naval Medical Research Institute Bethesda, Maryland.
PHYSIOLOGICAL EFFECTS OF MAGNETIC FIELDS ON MAN - Dietrich E. Beischer, U. S. Naval School of Aviation Medicine, Pensacola, Florida.
PHYSIOLOGICAL EVALUATION OF AEROSPACE PROTECTIVE EQUIPMENT AND LIFE SUPPORT SYSTEMS - Edwin Hendler, Air Crew Equipment Laboratory, Naval Air Engineering Center, Philadelphia, Pennsylvania.
THE EQUILIBRATION FUNCTION OF THE VESTIBULAR SYSTEM IN RELATION TO LINEAR AND ANGULAR ACCELERATION - Fred E. Guedry, Jr., U. S. Naval School of Aviation Medicine, U. S. Naval Aviation Medical Center, Pensacola, Florida.
PROGRESS IN EXTENDING MAN'S DEEP DIVING CAPABILITIES - R. D. Workman, CDR, MC, USN, Submarine Medical Research Officer, U. S. Navy Experimental Diving Unit, Washington, D. C.
BIOCHEMICAL AND PHYSICAL ASPECTS OF TRAUMATIC INJURY
PHYSICAL CRITERIA FOR EVALUATION OF TRAUMATIC INJURY - Willard L. Derksen and Thomas L. Monahan, Naval Applied Science Laboratory, Brooklyn, N. Y.
THERMAL AND CIRCULATORY FACTORS AFFECTING RECOVERY FROM LOCAL COLD INJURY - E. Hardenbergh, R. A. Anderson, LT, MC, USN, and E. D. Mundith, LT, MC, USNR, Naval Medical Research Institute, National Naval Medical Center.
THE BIOCHEMISTRY AND HISTOCHEMISTRY OF THE HOMOGRAFT RESPONSE - Michael F. Dolan, LCDR, Medical Corps, U. S. Navy, Tissue Bank Department, U. S. Naval Medical School, Bethesda, Maryland.
MODIFIED IMMUNOLOGIC RESPONSE OF THE BRIDGED HOST TO HOMOGRAFT TRANSPLANTATION - Leonard J. Cole, Experimental Pathology Branch, U. S. Naval Radiological Defense Laboratory, San Francisco, California.
BIOPHYSICAL AND CHEMICAL CORRELATIONS IN NERVE AND SYNAPTIC FUNCTION - S. L. Friess, Naval Medical Research Institute, Bethesda, Maryland.
PATHOGENESIS OF POST TRAUMATIC KIDNEY FAILURE - Paul D. Doolan, CDR, MC, USN, U. S. Naval Medical Research Institute, National Naval Medical Center, Bethesda, Maryland.
MICROCALORIMETRY: TOOL OF ANALYTICAL CHEMISTRY AND CHEMICAL THERMODYNAMICS - T. H. Benzinger, Bio-Energetics Laboratories, Naval Medical Research Institute, Bethesda, Maryland.
HYDROBIOLOGY
HYDRODYNAMIC PERFORMANCE OF SEA ANIMALS - T. G. Long, U. S. Naval Ordnance Test Station, Pasadena, California.
MARINE BIOLOGICAL ASPECTS OF MINE COUNTERMEASURES - William H. Tolbert and Garrett G. Salzman, U. S. Navy Mine Defense Laboratory, Panama City, Florida.
SONIC BACK SCATTERING BY SURFACE ORGANISMS - T. J. Walker, Applied Oceanography Group of the Scripps Institution of Oceanography, University of California, San Diego, California.
THE DEEP SCATTERING LAYER OFF THE CALIFORNIA COAST - Eric G. Barham, U. S. Navy Electronics Laboratory, San Diego, California.
THE U. S. NAVAL OCEANOGRAPHIC OFFICE PROGRAM OF DEEP-SEA FOULING RESEARCH - John R. DePalma, U. S. Naval Oceanographic Office, Washington, D. C.
A LABORATORY METHODOLOGY FOR STUDYING MARINE FOULING - A. Frieber-

PROJECT THERMA The Story of PDD's Supercold Magnet

By BUDD GOTT

One of the latest applied research projects at the Propulsion Development Department teams the very hot with the very cold when the flaming exhaust of a rocket engine is fired through the hole in a doughnut-shaped and "supercold" superconducting magnet.

The project, using the special-

ly designed and fabricated superconducting magnet, is an assignment from BuWeps and is called "THERMA."

H. Powell Jenkins Jr., who heads the newly-formed Advanced Technology Division, told this reporter that Project THERMA will lead to a better understanding of the magneto-transport properties of thermally generated plasmas — in this

case a rocket engine exhaust. THERMA is typical of several projects being conducted by the Applied Research Branch in fluid control and advanced energy conversion involving the interaction of electric and magnetic fields with electrically conducting fluids.

The Branch is also actively involved in projects concerning advanced propulsion concepts and fluid dynamics. The Branch is headed by Harold M. Larsen, who holds a BS degree in physics from St. Mary's College.

Krzycki Project Engineer Leroy J. Krzycki, THERMA project engineer, said that the superconducting magnet is wound with ten-thousands inch

diameter niobium-zirconium wire.

There are more than ten miles of wire on the magnet spool. When this wire is cooled to very low temperatures it loses all electrical resistance. If the magnet power supply is suitably disconnected from the magnet under these conditions, the current in the magnet coil will remain with no loss or gain — for many years if necessary.

Krzycki pointed out that the magnet fits around the rocket engine like a ring on a finger.

Supercold - Superhot

Liquid helium keeps the magnet at a temperature of -452° F., a temperature at which everything in nature (except helium) is frozen solid and only about 7° F. above absolute zero.

Scarcely an inch away, the rocket exhaust gases stream through the magnetic field at a temperature of 5700° F. — higher than the boiling point of most metals.

These extremes in temperature are necessary to keep the magnet wire superconducting and the rocket exhaust electrically conducting, conditions necessary for the experiment.

The tremendous insulation problem is handled by a type of super Thermos bottle called a "dewar" in which the magnet coil and liquid helium are placed and shielded from both the rocket engine and outside air by vacuum and liquid nitrogen barriers.

Krzycki said that the magnet, designed to NOTS specifications, represented one of the most advanced units of its type operating in this country and that it was the first known time that a true rocket engine and a superconducting magnet were operating together.

Personnel Involved Applied Research Branch per-

sonnel assisting Krzycki on Project THERMA are William M. Byrne Jr., assistant project engineer; James B. Lee, project physicist; and Harold R. Shingleton, instrument specialist.

These personnel represent a wide diversity of technical backgrounds.

Lee is a physicist with a Bachelor of Science degree from St. Mary's College. He came to NOTS in 1959.

Krzycki holds Bachelor and Master degrees in mechanical engineering from the University of Nebraska.

Byrne is a graduate of the Missouri School of Mines with a Bachelor of Science degree in mechanical engineering. He will soon obtain his Master's degree from UCLA.

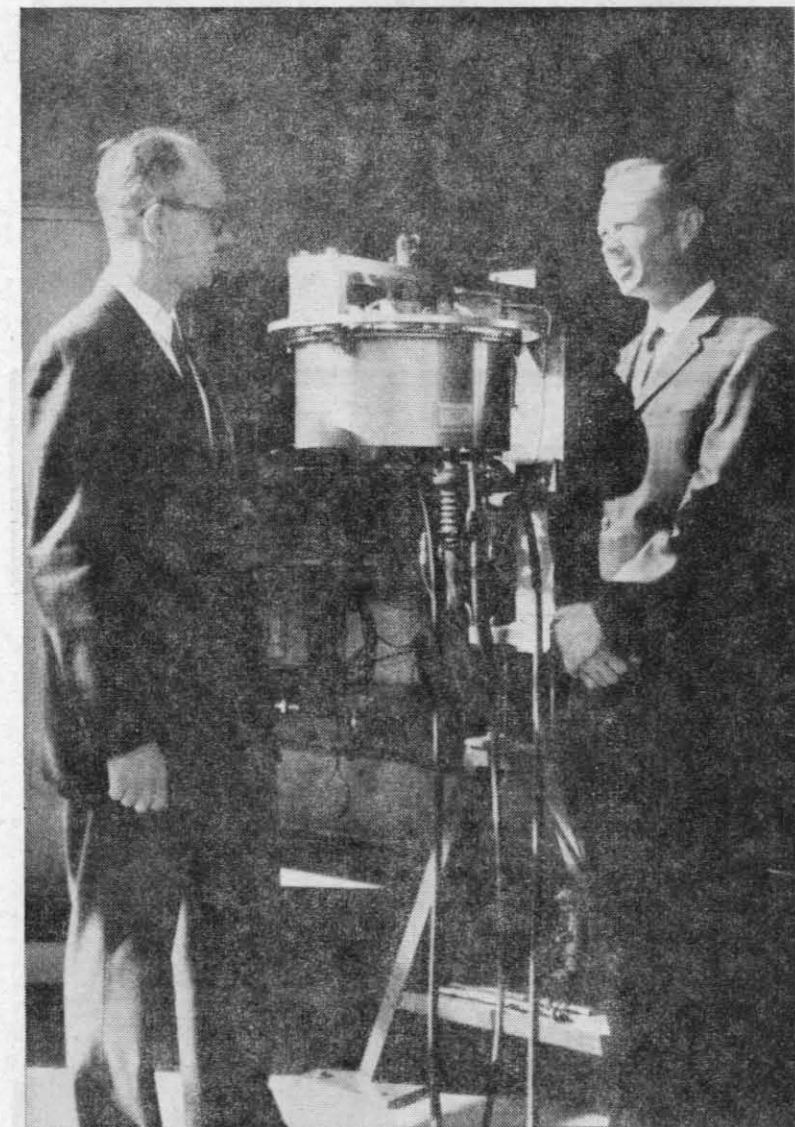
Shingleton has been in government service 21 years. His experience in applied research dates back to 1945 when he first came to work at NOTS with the Research Department and later transferred to the Propulsion Development Department.

Wide Technical Backgrounds

Branch Head Harold Larsen indicated that this wide range of technical backgrounds of Branch personnel was a deciding factor in proving the feasibility of generating electricity from the exhaust of a supersonic rocket — the first time this has been done.

This method of producing electricity from high speed, hot gases (called magnetohydrodynamic or MHD power generation) is considered promising both for commercial power generation and for special military applications.

The work done at NOTS in rocket-MHD power generation was reported by Krzycki at a recent Gas Dynamics Symposium at Northwestern University.



ANOTHER FIRST—Harold Larsen, Head of the Applied Research Branch, discusses experiment using super-conducting magnet with H. Powell Jenkins Jr., Head of the newly-formed Advanced Technology Division of the Propulsion Dept.



CHECK CURRENT — Harold Larsen (standing) and Leroy Krzycki check out the current trace of the super-conducting magnet.

Oldest Public Park

Boston Common, set aside in 1634 as public property, ranks as America's oldest public park. In 1830, the city fathers drove off the cows and planted trees and flowers.

The Art Gallery

CURRENT EXHIBIT, Room B of the Community Center. Show of paintings by Dolores Hoffman of China Lake. Sponsored by the Desert Art League. Public invited.



WHOOSH—AND IT'S GONE!—Members of Communications and Science Explorer Scouts Post 684E visiting Station this week, watched in awe as SNORT firing was demonstrated.

Group heard Lester Garman, head of SNORT division, give presentation on test facilities, following series of lectures and presentations of programs conducted at NOTS.



CHECK FLUID LEVEL—Leroy Krzycki, THERMA project engineer, and Harold Larsen, Branch Head, check liquid helium and liquid nitrogen indicators which show level of fluids within the "Dewar," a super Thermos bottle.

'Rain Clouds' Lecture By Jean Vaillant

A technical lecture on "Formation of Rain Clouds by Controlled Convection" by Jean Vaillant was scheduled for 10 a.m. today in Conference Room A of Michelson Laboratory.

Vaillant, a graduate of one of the oldest engineering schools in France - the well known Central School of Arts and Manufactures, in Paris - is a consultant on water problems.

For the past 10 years he has worked on and developed the methods originally conceived by H. Dessoliers in 1908 for the production of rain clouds.

Funds Okayed For New Propellant Facility at NOTS

Congress has completed action on a military construction appropriation bill which contains \$1,268,000 for a composite propellant facility here at NOTS, Congressman Harlan Hagen announced in Washington this week.

Hagen said the facility is needed here to properly mix batches of solid fuel propellants up to 2000 pounds for testing and evaluation in connection with intermediate size Navy weapons.