

WILLIAM H. THIELBAHR

William H. Thielbahr, Code 4585, will be awarded a Ph.D. in Mechanical Engineering by Stanford University on June 15, 1969. Thielbahr started his career at the Naval Weapons Center as a Junior Professional in June 1961, after obtaining his Bachelor of Science degree in Mechanical Engineering from Fresno State College. He obtained his masters in Engineering in 1964 from the University of California at Los Angeles through its China Lake graduate program.

Thielbahr began his studies at Stanford in January 1966 following receipt of an NWC Fellowship. He specialized in Thermoscience and did his Ph.D. thesis under Professor W. M. Kays on the topic: "The Turbulent Boundary Layer: Experimental Heat Transfer With Blowing, Suction, and Favorable Pressure Gradient."

In conjuction with the experimental work, he devised a method for predicting heat transfer, mean temperature and velocity profiles, and skin friction coeficient in acelerated turbulent boundary layers with blowing or suction at the

The boundary layer program is capable of solving any number of parabolic equations and thus can be used to calculate heat transfer, skin friction, etc. in chemically reacting flows.

This program can provide very useful information to those responsible for the design of components subjected to high temperature chemically reacting boundary layer flows.

Thielbahr, his wife Virginia and daughter Paige reside at 216B Mitscher, China Lake.

Scout Troop 68 To Collect Papers On Sat.

Boy Scout Troop 68 will collect old newspapers in the Bsite Capehart area starting at 9 a.m. Saturday, June 7. B-site residents are asked to bundle, tie, and place their newspapers on the curb in front of their home. The Scouts will pick them up.

Scouts of Troop 68 have conducted this drive successfully for the past three months, and now plan to repeat the venture on a regular basis on the first Saturday of each month.

NEW RATING PROCEDURES

re ratings for motion pictures at the Center Theater will be on two different types of ra ratings, and the new MPAA (Motion Picture Association of America) ratings (The Parents' Magazine ratings will ventually be superceded completely by he MPAA ratings.)

mitted only with parent or lega

PARENTS" Y)-Youths 13-17 (C)-Children 8-12

"PLAY DIRTY" (117 Min.) Michael Caine, Nigel Green 7:30 P.M.

(War/Drama) "Two men stop Rommel-Hitler, who can't give him enough fuel-and the other one is ME" sets WW II Desert Campaign. Exciting, strange nax. *(M) **(A, VMY)

--MATINEE---

"CAPTAIN SINBAD" (85 Min.) Guy Williams 1:00 P.M. Shorts: "One Droopy Knight" (7 Min.) "Trader Tom" (No. 2, 13 Min.)

"HARPER" (121 Min.)

Paul Newman, Julie Harris, Lauren Bacall 7:30 P.M. (Mystery) A return engagement with "Star of the Year" Newman as a private eye who

disappearance of Lauren's husband. No for the timid! (**(A) SUNDAY-MONDAY **JUNE 8-9** "BUONA SERA MRS. CAMPBELL" (112 Min.)

really takes his lumps investigating the

7:30 P.M. (Comedy) Boisterous laughfest about three former Air Force men, each believing he is the father of Gina's illegitimate daughan Air Force reunion. A riot of fun! *(M),

TUESDAY-WEDNESDAY JUNE 10-11 "AFRICAN SAFARI" (93 Min.) Award Winning Adventure

7:30 P.M. (Adventure) Thrill after thrill in never-before-photographed areas of the Dark Continent. See the wounded lion attack, the capture of the world's deadliest snake-the Black Namba, the eruption of Kitzimbony cano, the rare pygmy in his treacherous

Short: "Aquanuts" (17 Min.)

THURSDAY-FRIDAY "A MATTER OF INNOCENCE" (102 Min.) Hayley Mills, Trevor Howard

(Drama) What happens mousey, uneventful girl who is dominated by her aging aunt, is a sight to behold Especially in Singapore! Her path to sophis

Short: "Freeloading Feline" (7 Min.)

Promotional

(Continued from Page 2)

File application for above with Fawn Hay-cock, Room 34, Personnel Bldg. Ph. 71514. Sheetmetal Worker (Limited) JD No. 305, Code 704-Layouts, fabricates, assembles and installs and repairs objects and equipment. Works from blueprints, sketches and oral instructions. Normally works with sheet-metal of 10 to 26 guages in thickness (.019 to .125). Occasionally works with thinner metals and up to 14 inch in thickness

Qualifications: J-Element Standards. Clerk-Dictating Machine Transcriber, GS-316-04, Code 708 (Part-time) 36 hours per week - Duties of this position are to provide secretarial and clerical services to the Head, Maintenance Control Division, Incum bent transcribes from dictating machine as requested. Set up and maintain many files for permanent record. Receives visitors, relays information and messages and establishes appointment times., etc.

For all positions that require the J-Element standards, applicants should pick up Supplemental Rating Forms in the Personnel Department.

File applications with Dora Childers, Code 657, Room 32, Phone 71393.

Navy League Spotlights Model Flyers



MODEL AIRPLANE CONTEST WINNERS RECEIVE AWARDS—Tuesday afternoon, May 26, at the Community Center, Archie Meyer, Vice-President of the Navy League, presented awards to the four winners in the Navy League sponsored model airplane competition. The League provided trophies for the 1st place winners, and the Base Carpenter Shop donated model kits for the 2nd placers. Pictured here (I-r) are: Three year old Tacey Payne who received a one dollar bill in recognition of her spirited attempts; seven year old Scott Allred, 2nd place winner in class 1; nine year old Curt Schneider, 1st place winner in class 1; 13 year old Joe Strang, class 2, 2nd place winner; and Ben Lee, the 14 year old, 1st place winner in class 2.

Worm Journey

(Continued from Page 1)

Tiemann, who has published

important previous papers on

Bioluminescence, hopes to col-

lect enough railroad worms to

allow a study of the biochem-

istry of the luminous organs.

doesn't discourage him. "Zar-

phis larvae, a relative of the

railroad worm, were also con-

sidered rare until I learned

enough about their habits and

learned to trap them," he said.

Dr. John Buck, National Insti-

tute of Health, with specimens

for his work on the histology

and electron microscopy of the

light organs of the phengodi-

dae and to Dr. H. Seliger at

Johns Hopkins University for

their continuing study on the

spectroscopy of the light or-

He is also hopeful that en-

ough specimens may be found

to support some work on the

biochemistry of the luminous

n a previous trip to Bra

in 1960 Tiemann found the

Railroad Worm at Sao Jose

dos Campos. By enlisting the

aid of fazendieros and armed

with his trusty firecrackers, he

has high hopes of a successful

search this year. While in Bra-

zil, Tiemann will be in consul-

tation with Dr. U. R. Martins.

of the Museum of Zoology, in

Sao Paulo, and other entomol-

ogists in that country.

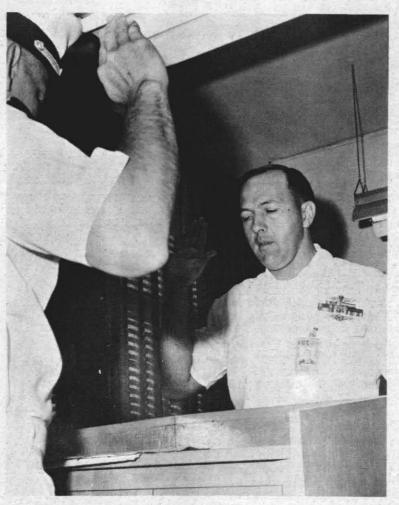
gans of luminous insects.

organs of this insect.

Tiemann plans to provide

The rarity of the insects

Hospitalman Re-enlists

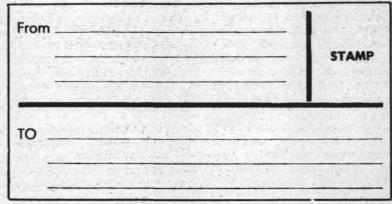


REENLISTMENT-Tuesday morning, May 27th, HM2 Eugene Bliss reenlisted for an additional four-year tour of duty in the Navy. Bliss has been stationed at the Naval Weapons Center since August 16, 1968, and is a hospital corpsman at the Station Dispensary. LCdr. Bates administers the oath.

Social Security Rep. At Community Center

All employees with questions about Social Security provisions may contact a representative from the Administration here next Wednesday, June

He will be at the Community Center from 8:30 to 11:30 a.m., and is available for consulta-





Vol. XXIII, No. 22 Naval Weapons Center, China Lake, California Fri., June 6, 1969

New Telemetry System

NWC Tests New UHF Telemetry

On May 26, the first UHF telemetry system, using the Navy's newly adopted High Rate Pulse Amplitude Modulation (PAM) format was successfully utilized in conjunction with a live firing of a Sidewinder missile.

The captive and free-flight phases of the program were accomplished with excellent cooperation from Range Operations, Drone Line, NAF, Instrument Operations, and especially T-Pad personnel.

During the test, the new telemetry system transmitted valuable guidance information that will be used to evaluate the performance of current and future similar vehicles.

The new system was designed and developed by the Engineering Department's Telemetry Branch under a cooperative task assignment from the SIDEWINDER and CHAPAR-RAL Program Offices.

Although the new Ultra-High Frequency (UHF) telemetry system has many advantages over the present Very High Frequency (VHF) telemetry system, the main reason for developing the new system was due to a Department of Defense directive requiring all telemetry operations to vacate the present VHF band for allocation of additional communications channels. A new band of frequencies in the UHF re-

(Continued on Page 5)

FINAL CHECK-Electronic Technician Les

Dalton of the Telemetry Branch of the En-

gineering Department is shown making fin-al calibrations checks on his equipment in

preparation for receiving UHF telemetry

signals from the newly developed system.

Physicals For Summer Camp At Dispensary

The Center Dispensary is now offering camp physical examinations to eligible dependents on an appointment basis.

Parents of children who will be going to summer camp are encouraged to plan ahead and make appointments well in advance as Dispensary work load will not permit last minute arrangements. Camp physicals cannot be obtained at regular dependents' sick call as that time must be used for acute illnesses and emergen-

Appointments may be made by calling the Pediatric Clinic (Ext. 71683) during normal working hours. When reporting for the examination children must be accompanied by a parent, examination form showing individual camp requirements must be presented and a valid I.D. Card must be



er of Sgt. John Pinney, a recent fatality of the Vietnamese war, is shown above placing the Gold Star wreath on a symbolic grave during Memorial Day Services held May 30 at Desert Memorial Park in Ridgecrest. Assisting Mrs. Pinney is Joe Gale of the DAV. The patriotic program is held each Memorial Day by local Veterans' groups.

Requirements Changed For Summer Work

The Civil Service Commission recently announced changes in the qualification requirements under the Summer Aid Program (formerly called The Youth Opportunity Campaign) for economically and educationally disadvantaged youths between the ages of 16 and 22. Previously, the Center was not allowed to employ sons and daughters of Military and Civilian employees under this gineering technician at NWC.

A dependent youth, Military or Civilian, may now be eligible for employment provided the total family income falls (below) by the Civil Service Commission

In order to qualify, the total take home pay (including deductions for rent, loans, savings, etc.) must not exceed the amount listed in relation to family size as shown in two categories listed below:

	Caregory		EST
nily	Income	7 /23	Income
ize	Non-Farm		Farm
1	\$1,600		\$1,100
2	2,100		1,500
3	2,600	UV.	1,800
4	3,300	135	2,300
5	3,900		2,800
6	4,400	200	3,100
7	4,900		3,400
8	5,400		3,800
9	5,900		4,100
0	6,400		4,500
1	6,900		4,800
2	7,400	1	5,200
3 or more	7,900		5,500
		_	

This facility, located in Michelson Lab, is

used in the design and development of new

telemetry systems. This telemetry station

is capable of receiving, transmitting and re-

cording both telemetry and television in-

formation.

(Continued on Page 3)

Code 30 Engineer Heads for Brazil On Worm Search

Armed with \$5 worth of firecrackers, Darwin L. Tiemann, of the Optical Instrumentation Branch, Instrument Operations Division, will soon enter the Brazilian jungles in search of the larvae of an elusive beetle known as the "railroad worm."

Tiemann, an Engineer in Code 3063, seeks Phrixothrix, a remarkable luminous organism seldom seen by man.

The wormlike larvae of the beetle resemble a toy train on a night run - an image that inspired its unscientific name. As it crawls on dark ground, patches along its sides twinkle yellow-green like the lighted windows of a railroad coach. At the same time its head glows fire-red.

Few Specimens Studied Only a handful of specimens

have been found, in Central and South America. Even fewer have reached the United States for laboratory study of their odd bioluminescence. Tiemann will begin his

search at Sao Jose dos Campos in the Brazilian state of Sao Paulo, where he discovered a few specimens in 1960. He is supported by a grant from the National Geographic Society.

This time, he said, "I hope to collect enough material to breed them in Brazil, and then try to rear them back in the United States."

Difficult to find when they're aglow, the larvae are virtually impossible to spot when their lights have dimmed. Unless irritated by a noise or other disturbance, the wormlike larvae ordinarily remain dark, resembling plump, two-inch-long caterpillars.

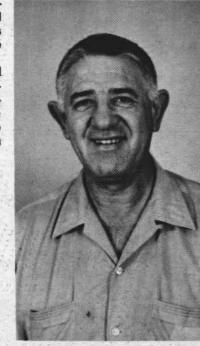
Mr. Tiemann's plan to stimulate their glow and facilitate their capture is simple: "I hope to startle them with firecrackers in the field at night," he

He will establish lines of pitfall traps in likely areas. These traps are made by burying open-top containers flush with the ground, then placing covers so they extend a few inches beyond the edge of the containers.

Insects crawl under the edge of the cover and fall into the container

To Spend Four Months

The project will take Mr. Tiemann away from his regular occupation for about four months. He is a supervisory en-



DARWIN L. TIEMAN

CHAPLAIN'S MESSAGE

Right Or Wrong



CHAPLAIN RALPH H. MOE

Moral decisions of "right or wrong" are not always easily made. That's why my Sunday sermon will be on the theme, "The New Morality of Jesus!

It is quite strange, really, that Christ's ethics for decision making are so little in evidence in our culture and society. It's easy for us to consider competing athletic teams and politicians hotly contesting for offices; but relatively few realize that the battle progressing in the ethical field will profoundly influence the future of every one of us. And fewer yet care.

The competition between "Conventional Morality" and the "New Morality" (in Christian circles) has generated more "heat" than "light." Some have gone so far as to demonstrate their total lack of appreciation for the issues involved as to piously chirp, "What we need is not a new morality but more morality!"

What traditionally "parades" under the banner of Conventional morality usually combines an understanding of what the Bible teaches with the mores of society. Prominently included in this code are the Ten Commandments and the Sermon on the Mount. The laws therein are accepted as God's absolute rules for man to live by, without regard to circumstances. Though interpretations may vary somewhat, the basic idea is to determine precisely what the rule is, obey it, and let the "chips" fall where they may!

"Love" is the key word in the so-called New Morality. It is regarded by most as the only absolute. When faced with a decision, therefore, the question to ask is this: "What is the most loving thing that can be done - with all factors taken into proper consideration?" When acted upon superficially, without deeply Christian concern, the results are quite unacceptable to Christians of Maturity.

As over against traditionalists, they agree on this: It is precisely where the "chips" will fall that makes all the difference. Therefore, laws may be broken from time to time.

Is the New Morality shocking to you? I'm sure it is to most Christians. For, although Jesus was frequently found to be disobeying the law, actually going against the precepts of duly constituted authorities that he is quoted as both recognizing and recommending to his disciples, very little relevance to this fact is evident in Christian ethics down through the ages.

I think it's worth considering — especially for Christians and others interested in matters of right or wrong! That's why I intend to preach on this theme next Sunday morning at the All Faith Chapel.

CENTER LIBRARY LISTS NEW BOOKS

A complete list of new books is available in the library. Fiction

Gilbert-Jamey Lathen-Come to Dust Lowden-Bandersnatch Susann-Love Machine Non-Fiction

Bennett-From Baedeker to Worse. Dunne-The Studio Grant-The Rock Paintings of

the Chumash Guitar-The Young Marriage Kroeber—Almost Ancestors Novick—The Careless Atom

Pictorial History of the Negro in America Smith-Germany Behind the

Courlander-The Drum and The Hoe. Grant-Rock Drawings of the

Coso Range, Inyo Co., Calif. Gregory—The Shadow That Scares Me. Jones-The Treasury of Dogs.

Li-The Essence of Chinese Civilization.

Pizer—The United States Sutton-The Life of the Desert.

DIVINE

Morning Worship-8:15 and 11 a.m.

Roman Catholic (All-Faith Chapel)-

Sunday School-9:30 a.m., Chapel An-

nexes 1, 2, 3, 4 (Dorms 5, 6, 7, 8) lo-

Holy Mass-7, 9:30 a.m., and 12:30 p.m.

Daily Mass—11:30 a.m. in Blessed Sacrament Chapel. Saturday, 8:30 a.m.

Confessions-7 to 8 p.m. Saturday

NWC Jewish Services (East Wing All-Faith

Chapel)—8 p.m. every first and third

Sabbath School—10 a.m. to noon, every

Unitarian Fellowship-(Chapel Annex 95, 95

King Ave.)-Sundays, 7:30 p.m.

Protestant (All-Faith Chapel)-

The Rocketeer Official Weekly Publication U. S. Naval Weapons Center

China Lake, California Capt. M. R. Etheridge, USN

"J." Bibby Public Affairs Officer

Joan Raber Associate Public Affairs Officer (Acting Director of News Bureau William P. Valenteen, Jr.

Jack C. Lindsey

PH1 Gary D. Bird, PH2 Delmar E. Hart, PH2 Michael F. Krause, AN Maurice Dias, Staff Photographers

DEADLINES: Tuesday, 4:30 p.m. Tuesday, 11:30 a.m.

Rocketeer receives Armed Forces Press Service material. All are official U. S. Navy photos unless otherwise identified. ance with NavExos P-35, revised July 1958. Office at Nimitz and Lauritsen. .. 71354, 71655, 72082

PROMOTIONAL OPPORTUNITIES

ccompanied by an up-to-date Form 58.

tive from the 6 to the 13th June 1969. Supply Clerk (Typing), GS-2005-04, Code 258 - Processes receipts, issues, and stock processing programs; and maintains li son for follow-up, status, and expediting with NWC departments, NAF and VX-5.

Flame Cutter (Scrap), WB-37002-06, Code - Receipts, segregates and reduces of metal, stores and lots scrap for sale. Estimates amounts of scrap by weights.

Supervisory General Supply Officer, GS-2001-13 Code 251 - This position is that of Head, Planning Division, Supply Department. This is a staff position reporting to the Difor policy and procedural surveillance of all general supply and procurement effort at the Naval Weapons Center, China Lake and

Head, Planning Division, Supply Department. The function of the Planning Diviservice in a staff capacity to the Director of Supply; receives, analyses and recom and directives from higher authority and provides planning assistance to all divisions. Assists the division head in carrying out duties and responsibilities of the Divi ion, and as Head, Procedures Analysis Branch in the conduct of studies, investigations and recommendations required by the Supply Department.

ole Cadle, Bldg. 34, Rm. 26, X-71648. Refrigeration and Air Conditioning Mechan-ic, JD No. 212, Code 70433 — Installs, maintains and repairs refrigerating and air conditioning equipment and components used in providing refrigeration and air condition ing for living quarters, officers, and industrial uses. Qualifications: J-Element Stan-

Plumber, JD No. 209, Code 70421 - Lays out, cuts, bends, assembles, and installs fittings, and fixtures to construct or tain piping systems such as fresh water, hot water, salt water, sanitary drain sewer pipe, fire-protection sprinkler, and fuel gas systems. Locates leaks and obstructions, and repairs or clears them. Qualifications: J-Element Standards.

Carpenter, JD No. 177 Code 70411 - Intions to wood structures of buildings. Contructs, repairs, and installs various wooden articles and items of equipment. Qualifica-

Electrician, JD No. 180, Code 70431 Constructs, installs, maintains, and repairs various electrical wiring systems, electrical controls, electrically operated equipment, or instruments, and light and heavy electrical achinery. Qualifications: J-Element Stand

Clerk-Typist, GS-322-04, PH No. 870009, Code 7040, (Part-Time) 36 hours per week. Incumbent types masters for all forms used n this section. Also types work requests and job order status reports for all jobs requested of Public Works by each Department on the Center. Maintains the files on all job writeups that are received in the section. Incumbent is responsible for the maintenance and control of all work request re-

Helper (Various Option) WB-5, Code 70 he following trades: Electrician: Painter Rigger; Sewage Disposal Plant Operator; Sheetmetal Worker; Structural Iron Worker; Heavy Duty Equipment Mechanic; Automotive Mechanic; Woodworker; Refrigeratio and Air Conditioning Mechanic; General; Plumber; Pipecoverer and Insulator; Plasterer; Tile and Plate Setter; Heating Equipment Mechanic; and Machinist.

All interested non-temporary employees are invited to apply. Employees' who applied for the Helper vacancies advertised in February 1969 must apply again. A Helper examination will be scheduled for employees who have not taken the examination and for employees who have taken the examination previously but did not attain a passing score. Non-competitive selection for Helper vacancies will be made from the list of eligible applicants resulting from this ad through August 22, 1969.

Equipment Specialist GS-5 or GS-6-This position is located in the Echo Range Operations Branch, Countermeasures Division, Systems Development Department. Place of employment is Randsburg Wash Teat Range Incumbent will be required to establish and maintain an organized spare parts system, working closely with Electronic Technician in ascertaining spare parts levels for electronic and mechanical equipment at Echo Range. He will be responsible for initiating material requests and maintaining inven-

(Continued on Page 8)

Reardon Memorial Wreath



PRESENTS WREATH—Capt. L. A. Dewing, Commanding Officer, NAF, places a wreath by the Dedication Plaque at Reardon Field in the second annual Memorial Service in honor of Cmdr. W. L. Reardon, Executive Officer of NAF, who lost his life in an airplane crash, March, 1967. A wreath is sent yearly by Betty Reardon, widow of Cmdr. Reardon, who now lives in San Diego.

CHP Gives Safety Program

Richard Halen, principal of the school, had heard of the program, and together with Officer Downs, they showed the children of Groves School how far it takes to stop a patrol car, a bicycle, and a pedestrian.

With the help of three children, Pam Muckle, stop sign girl; Ernest Shepherd, Reaction Time boy; and Pam Drake, Danger Sign girl, he proceeded to check stopping distances.

Lynn Tegowski, giving a demonstration of how fast she could walk, went an additional 2½ feet after a horn sounded before she could stop.

Then Becky Feagle was told to run and to stop when the horn blew. Becky went 28 feet

Officer Phillip Downs, of the Downs mentioned that most California Highway Patrol of the streets are about 20 to brought his Patrol Car onto the 40 feet wide, and that Becky Groves Street School grounds might be out in the middle of Monday, June 2, to present a the street if she ran without program called "Stop On a looking to see what was com-

The next demonstration involved Brian Carle and his bicycle. He was instructed to go as fast as he could until the horn sounded. It took Brian 5 feet to hit the brake and an additional 211/2 feet to stop, total of 261/2 feet.

Teacher Drives As the last demonstration of the day, Officer Downs, with Mrs. Diana Adams, a teacher at Groves School, drove the Highway Patrol car up to the speed limit, 20 mph, and at the signal tried to stop the car as fast as he could. It took Officer Downs 13 feet to get his foot on the brake and 71 feet to stop. The children were impressed with the long distances involved in after the horn sounded. Officer stopping a moving automobile



THE WINNING TICKET—At a special drawing held last week of tickets that have already been sold, an additional 100 tickets were won by Pat VanSkike, who works in Code 1761. The tickets will enchance her chances considerably to win the 1969 Camaro to be given away by the Navy Relief at the end of their current fund drive. Phyllis Mc-Guire, a clerk-steno in Code 1781, hands Mrs. VanSkike's ticket to SN Scott K. Blevins. LCdr. C. M. Bates, coordinator of the Fund Drive, looks on. The Camaro will be given away to a lucky ticket holder June 28 at Bennington Plaza.

Rescue Group Members Try Ecuador Peak



Friday, June 6, 1969

BUSMAN'S HOLIDAY-China Lake Mountain Rescue Group are shown in assaults they made on three different mountains in Ecuador in March of this year. In the photo above, right, Charles Ringrose, Russell Huse of China Lake, and Eric Hoffman, of Riverside, are shown at the 17.000 ft. level on El Altar. Dr. Carl Heller also of China Lake, was also along on the expedition. At right, a member of the expedition is shown at the high camp, 19,000 ft., on Chimborazo volcano. Above, climbers are approaching an ice wall on Cotapaxi at the 18,000 ft. level. The China Lake Mountain Rescue Group will present a slide show of the expedition on Tuesday, June 10, at 7 p.m., at Richmond School. The two-hour program is entitled "The Mountains and People of Ecuador." Admission will be \$1, and all proceeds will go toward the purchase of Group Rescue and Communication Equipment. The slide show will be repeated on June 25.





Regelson Transfers To NASC

(Continued from Page 4)

of information between government agencies and aircraft manufacturers.

He organized and administered the 7th Symposium on Infrared Countermeasures held at General Dynamics in San Diego last December.

Transferred to Code 30 In April of 1965, Regelson and his group were transferred from AOD to the Systems Development Department. While with the Systems Development Department, Regelson initiated aimed at decreasing the vulnerability of military aircraft, ships, and surface vehicles to detection and attack by infrared operated ordnance.

In addition, he supervised the development of new types of instruments and techniques termeasures systems, devices, and methods. He also developprocessing and reporting meth-

In a reorganization in March

frared C o u n t e r measures

Regelson has published over 50 papers relating to his field and has made over 100 technipresentations, including many at the Department of Defense level, the Navy Science Symposium, the Infrared Information Symposia, and to airframe and aircraft manufactur.

Born in Cleveland, Ohio, Regelson attended New York's City College and received his B.A. degree from UCLA. He served as staff sergeant with and managed R & D programs the Army Air Force from 1942

Retired Servants Hold Outing

Local Chapter No. 748, Narequired to evaluate passive tional Association of Retired and active infrared coun- Civil Employees, will have a potluck picnic at Kernville Park by the River Kern, Suned improved data recording day, June 8. All eligible members and their guests are in-

Any employees presently elof this year, Regelson was igible for optional retirement named Consultant to the Sys- may join the Chapter as a Natems Development Department tional and Chapter member. while Howard Sumnicht was Those who attend are asked to named Acting Head of the In- bring their own table service.



ERNEST LAMSON and his wife, Nancy, r, listen attentively as Dr. James E. McDonald, Senior Physicist of the Institute of Atmospheric Physics, and Professor, Department of Meteorology, University of Arizona, make a point at a meeting held May 27 at the Community Center. Dr. McDonald, a recognized authority on UFO's spoke to members of the Research Society of America, China Lake Branch, at the 1969 Spring Meeting. His subject for the evening was "UFO's and the Condon Report."

Business Women Cited for Press **Book at Meet**

The China Lake Business and Professional Women's Club (BPW) was one of three clubs in the California Federation of BPWC who were cited for their participation in the press book competition, according to June Brown, Public Relations Chairman, who presented the book and certificate to Marjorie Reed, the 1968-69 president, at the May 27 meeting held at the Station Restaurant.

Judging was based on the number of column inches of news print. The winning book contained over 2,500 inches. nearly 600 more than the 910 inches of the local book.

To Convention Irene Branham, former pres-

ident, and June Brown represented the local BPW club at the 49th Annual Convention of the California Federation held May 16-18 at the Century Plaza Hotel in Los Angeles. Other members attending were Alice Lafleur, alternate; Clara Bower, and Wardna Abernathy. Delegates will report to the Club at the June 10 meeting, which will be held at 11:30 a.m. at the Station Restaurant.



PAT McDONALD

Pat McDonald, son of Mr. and Mrs. Alfred A. McDonald of 32-B Ashworth, on the Center, compiled a 75.2 average for the season to lead the California Western College golf team to a 15-1 record in their second season of competitive

McDonald, a runner-up last year for the China Lake Golf Club championship, is a grad-uate of Burroughs High School, where he was All - League in

golf for four years.
The 5 ft. 10 in. freshman will be a member of the California Western team that will compete in the National NAIA championships at the Meadowbrook Country Club course in Fort Worth, Texas, June 8-12.

During the summer months McDonald will instruct a golf class for the Youth Activities Center, under the direction of Marty Denkin.

Blue Cross/Blue Shield Agent To Visit Here Wed.

The Blue Cross/Blue Shield Insurance representative, Norman R. Smith, will be at the Community Center next Wednesday, June 11, from 9 a.m. to 4 p.m., according to T. J. Haycock, Head, Employee Management Relations.



The China Lake Tennis Club Spring Tourney finals were held at the Station Courts Saturday, May 31 with Fred Hagist, 67 years old, winning the big prize-the men's singles first place trophy. Hagist, seeded third, beat top-seeded Jim Smith in the semi-finals, 6-3, 6-4, and then went on to defeat 2nd seeded Don Beresford in the finals, 6-4, 6-3.

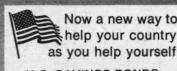
Rita Wack defeated Sherry Miller for the women's singles crown, 8-6, 6-2 and then teamed up with Charlotte Blum of Trona to win first in women's doubles, beating Janie Cleaves and Sherry Miller 6-

In the men's doubles category, Jim Smith and Dave Keranen breezed through all their matches to win first place. In the finals, Smith and Keranen defeated Bob Campbell and Eric Haseltine, 6-2, 6-2.

Fred Hagist and Joan Leipnik, a father and daughter combination, outplayed Jim Smith and Rita Wack in the final round to win 4-6, 6-3, 6-4.

Dick Mello presided over the presentations, also giving the Bustards a huge scrapbook of funny clippings and captions. Club members signed the book and bade farewell to the Bustards, who have left on or-

The trophies were awarded at a steak dinner at the golf club house Saturday night, May 31, following the tourney. Cmdr. "Buck" Bustard and his wife Jean, a past president of the club, were given a beautiful silver punch bowl and tray set by the tennis group. Engraved on the tray was a tribute to the Bustards for their "outstanding contribution to tennis" at NWC.



U.S. SAVINGS BONDS **NEW FREEDOM SHARES**



SPONSORS INDIANS-Bill Lutes, (r), of the Western Exterminator Corporation, is shown presenting a check for \$200 to George Wright, (2nd from right). The company sponsors the Indians in the "A" Division of the Pony League. Charlie Martin, left, and Clyde Hazen, second from

Colts Dominate League Play; "A" Div. Tigers Finally Win

four games and lead the second place Dodgers by two

The Colts slammed out 12 hits to whip the Angels 9 to 3 in last week's action. Steve hits over four-plus innings. Robinson scattered nine Angel hits to pick up his second win and Bobby Nelligan got two hits and three RBI's to lead the Colt attack.

In one of the most closely contested games of the holiday-shortened week, the "A" Division Tigers got into the Win column as they edged the Yankees 5 to 4 with the help of a home run by Steve Hammon. Charles Cordell of the Yankees hit his first homer of the year in a losing ef-

The Colts, under manager League standings tightened Harold Stalnaker, continue to up in the Pony "B" Division dominate the Colt League as as the league leading Angels the senior circuit reached the overcame a four-run deficit to job in relief as he struck out seven and allowed only two

> In other action in the Colt League the Dodgers evened their season's record by nip- gue with the bat, having five ping the Giants 6 to 4. Don had a little trouble in the fourth as the Giants collected four hits and four runs in that frame. Branson shared the batting honors with Danny Pinto and Jeff Radcliffe, who each had two hits.

Pony/Colt Annual **Pancake Benefit** To Be Held Sat.

The second annual Pony/ Colt League pancake breakfast will be held this Saturday, from 7 to 11 a.m., in front of 7. Rich Peurson, VX-5 7 3 0 0 .429 the Shopping Bag Markets. The 8. Bill Morten, R. Shell 10 4 1 0 .400 the Shopping Bag Markets, with all proceeds going to the Pony/Colt league program, is the principal fund raising Youth Activities event for the league.

More than 170 boys now an Wells Valley activity, will benefit from the annual affair. The leagues expenses total some \$4,000 per season, an average of \$24 per boy.

ing sold by all players and es in Girls' Softball; Bowling; league officials. Boys selling Tennis; Golf; Crafts; and Girls' at least 20 tickets will qualify Volleyball. for a free trip to a major league game in Los Angeles ties consisting of the High which is scheduled shortly Timers' Club, (8 years through after the close of the regular 6th grade); Juniors, (7th and season play in July.

League treasurer, will soon be held. mailing detailed itemization of expenses and sources dances, bingo, splash parties, of revenue to all parents of

Ace TV; Galloway Tops In Softball Play Last Week

Bert Galloway, pitcher for the Ace-TV softball team in the Intramural Softball League, has stretched his scoreless innings pitched string to 28. Close behind him is Bert Andreason, who does the hurling chores for Ridgecrest Shell, with 21 scoreless innings. The two giants of the league are also running neck and neck in strike outs; Galloway has 42 and Andreason, with 7 innings less, has 37.

In action that took place Tuesday, May 27, NAF whipped El Ranchito 9 to 6 on Gary Arnold's home run in the fifth inning. Arnold went two for three and batted in four runs.

In the 8 p.m. game Ace TV beat VW-5 7 to 0 with Bert Galloway flinging a perfect game going into the fifth inning when Jack Numes broke it up with a single. Numes' hit was the only one of the game against Galloway. Chuck Newmyer and Dennis Crager hit back to back triples.

Wednesday evening saw Galloway again shutting out Magic Cleaners 1 to 0 in a close game at 6 p.m. Galloway won his own game driving in a run in the seventh inning.

At the late game Wednesday Drex Moulder started off half-way mark. The Colts re- eke out a 5 to 5 tie with the in a rush hitting an inside the main undefeated, having won scrappy Braves in a game cal- park home run. Al Hyles hit led after five innings because his third home run of the of the time limit. Jim Bowen year and in the fifth inning turned in an excellent pitching Jim Ayers hit a grand slam home run, as Ridgecrest Shell pounded out another 21-0 win, this time over hapless NAF.

Ridgecrest Shell is far and above the big team in the leaof the top ten leading batters. Branson, the dodger hurler, They also lead the league in home runs and RBI's.

Following are the standings and the top ten:

Won	Lost	GBL	PCT.
Ace T.V. 4	0	****	1.00
Ridgecrest Shell 3	0	1/2	1.00
El Ronchito 1	2	21/2	.333
Magic Cleaners 1	2	21/2	.333
VX-5	2	21/2	.333
N.A.F. 1	3	3	.250
Genge 0	2	3	.000
TOP TEN BA	TTERS		

AB H rbi HR Pct 1. Dick Rivers, El Ranchito 6 4 1 0 .667 3. Jim Ayres, R. Shell 9 5 5 1 .556 4. Al Hyles, R. Shell 14 7 9 3 .500 9. Roger Short, R.Shell 13 5 1 0 .385

The Youth activities Center, under the direction of Tickets, at 75 cents, are be- Marty Denkin, will hold class-

In addition, weekend activi-8th graders), and Seniors, (high George Wright, Pony/Colt school and college), will be

Other activities planned are field trips, and varied social and sports activities.

Bob Bechtel Named Recipient Of Southern California Edison Award

Awards and scholarships representing over \$12,000 were iors at the annual Burroughs High School Senior Awards Assembly held on Tuesday, June 3, in the high school gymnasium. The names of the Awards and their recipients are listed

Friday, June 6, 1969

Kermit Richards and Delores Wright received the Attendance Office Awards for perfect attendance during all four years of high school. Mary Farmer was presented with the Indian Wells Valley Nurses Club Scholarship; Pat Getusky with the D. B. Howe Memorial English Award.

The Kern County Panhellenic Award was presented to Elizabeth Ward; the Bausch-Lomb Science Award to Charles Goff; and Rotary's Triangle Sports Scholarship to Jim Ber-

Robert Bechtel was the recipient of a Southern California Edison Scholarship which includes \$1,500 a year for four years of college, and \$3,000 worth of Southern California Edison stock.

The Henry Dubin Chemistry Award was presented to Richard Weiss, while the Burroughs Tennis Award was given to Rossella Ferrari, Burroughs' American Field Service exchange student.

John Pearson received the American Legion Speech Award, and Beth Young, Rotary's Outstanding Business Award. Elizabeth Ward, John Pearson, and Bob Bechtel were listed as Governor's Scholars.

It was announced that Elizabeth Ward had received Honors at Entrance to the University of Redlands, and Mary Schaniel to Mount St. Mary's College.

Elizabeth Ward also received a \$100 bond as recipient of the Elks Club Most Valuable Student Award. In addition, Molly McCammon and Andy Carlson received bonds as first place winners in the Elks Leadership Contest.

the Heart Association Science Award, as well as the Ameri- sembly. can Institute of Chemical Engineers Award.

Molly McCammon received the Business and Professional

Elizabeth Ward and Molly assistant principal. McCammon were the recipi-

Category II

Non-Farn

\$1,985

2,855

4,345 5,080 5,700 6,300

6,900 7,500

8,100

8,700

9,300

9,900

Category I must be placed be-

fore those who qualify for Cat-

All youths who qualify in

Hardin Lineback P.T.A. Scholarships were presented to presented to outstanding sen- Jean Husel and Ray Merrow, and the Burroughs High School P.T.A. gave scholarships to Jim Cornish, Betty Phillips, and Bill Soballvarro. Mary Schaniel, Mary Farm-

er, Colleen Mason, and Sue Villison were recipients of Drummond Medical Candy Striper Scholarships. Tracy Fifer received the Desert Empire School Foods Services Award.

Future Business Leaders of America honored Beth Young, Carolyn Sibley, Sybil Aulds, and Jerri Roberts with monetary awards.

The Betty Crocker Homemaker Award was presented to Mary Finch, the Key Club Scholarship to Jim Simmons, and Le Cercle Français Awards to Kitty Turner and Tracy Fifer.

Bank of America Award certificate winners were revealed to be Patti Peterson, Mark Viers, Kitty Turner, Jean Boyack, David Becker, Lee Huff, Eric Haseltine, John Pearson, Jim Cornish, David Cassil, and Theresa Bork.

Plaque winners in this contest were Ivar Highberg, Fine Arts; Bob Bechtel, Science and Mathematics; Molly McCammon, Liberal Arts; and Beth Young, Vocational Arts. Mr. Kenneth Westcott, Bur-

roughs principal, announced the 34 senior California State Scholarship semi-finalists. He noted that this was a record number for the high school.

In addition, Westcott presented National Merit Scholarship Letters of Commendation to Molly McCammon, Robert Wisdom, and John Pearson. National Merit Finalists Elizabeth Bechtel received plaques.

The Edith Karner Club Service Award was presented by Mr. John Drow, Director of Activities, to Pep Club and French Club.

The American Field Service foreign exchange student, Rossella Ferarri from Italy, and the French Club exchange stu-Lee Huff was presented with dent, Oliver Borrione, gave farewell addresses at the as-

At the conclusion of the Senior Awards Assembly, Molly McCammon, editor - in-chief of the high school yearbook, Women's Club Scholarship, and the EL BURRO, announced the John Franich, the Machinists dedication of the book to Mr. Union Auxiliary Scholarship. Lloyd Lundstrom, Burroughs'

ents of the American Associa- ior Class in presenting the gift tion of University Women of a hammock lounge to Mr. Scholarships, and Alice Burch, Kenneth Westcott upon his rethe Girls Service League tirement as high school princi-

for employment if he is a mem-

Summer Work Requirements Change

6.515

(Continued from Page 1)

FEDERAL AND NWC PINS-Many years of government service were recently honored when Federal and NWC service pins were awarded to 13 NWC employees. Shown above with their pins are, front row, I-r: Dean Couch, 20 yr. Federal and NWC pins; Edith Kirk, 20 yr. Federal and NWC; Don Shelhart, 20 yr. Federal; and Lewis Rad-

cliff, 20 yr. NWC. Second row, I-r: Walter LaDassor, 20 yr. NWC; Cecil Glass, 20 yr. NWC; and Terry Driver, 20 yr. NWC. Third roe, I-r: P.S. Wiggins, 20 yr. Federal; Howard Leonard, 30 yr. Federal; Thomas Crookshanks, 20 yr. Federal; and Stanley Johnson, 20 yr. NWC. Fourth row, I-r: Herschel Hicks, 20 yr. NWC; and Pleasant Aulds.



PINS AWARDED—Federal and NWC pins were recently handed out by Ray W. Van Aken, Head of the Aeromechanics Division, at ceremonies at Michelson Lab. Pictured above are left to right, front row: Pasqual Mercado, 20 yr. NWC pin; Warren K. Smith,

20 yr. Federal and NWC pins; Albert E. Brown, 20 yr. Federal and NWC. In the back row are, left to right: Lloyd E. Schilberg, 20 yr. NWC; C. Frank Mackarain, 5 yr, NWC; Renard E. Smith, 5 yr. NWC; Dick Compton, 5 yr. NWC.

A youth may also be eligible CSC Lists New Hazard Premiums

ber of a family which is eligi-The Civil Service Commis- to evaluate the capability to ble to receive financial as- sion has released four new make a satisfactory landing sistance under a public welfare conditions of work environment with the tires deflated. which entitle the employee to The Summer Aid Program is additional pay. The additional Polar Areas-Landing in poentirely separate from the pay will be 25 per cent of base lar areas on unprepared snow regular Summer Employment pay added to each hour of the or ice surfaces and/or taking-Program which is staffed from shift, including overtime hours. off under the same conditions.

a list of eligibles as a result The new conditions are: ment Examination may also be flate upon retraction, under- jumping techniques. eligible provided they meet taken to appraise the normal Ground Work Beneath Hovthe above requirements. deflate-reinflate cycle and also ering Helicopter-Participating

Landing and Taking-Off in

Experimental Parachute of the Summer Employment Flight Tests of Expandable Jumps - Participating as a Examination. However, youths Aircraft Tires-Landing to test jumper in field exercises to who took the Summer Employ- aircraft tires designed to de- test and evaluate new types of

in ground operations to attach external load to helicopter hovering just overhead.

The effective date for paying additional pay for work under the above conditions was the first pay period beginning after April 9, 1969, according to the Civil Service Commis-

Employees with questions concerning the conditions are asked to call Bill Blinkhorn, Head, Wage and Classification Division, at extension 72296.



WINNERS OF THE annual Tennis Club Spring Tourney pose with their trophies in the Pro Shop at the Golf Course following the tournament. In the back row, I-r, are Don Beresford, runner-up in the men's singles; Fred Hagist, 1st place men's singles and mixed doubles; and Jim Smith and

Dave Keranau, men's doubles. In the front row are Rita Wack, winner of the women's singles and with Charlotte Blum winners of the women's doubles; Buck Bustard, coordinator of the event; Sherry Miller, 2nd women's singles, and Roy Miller, member of the Executive Board.

Parents of children aged 8 through 19 who wish to enroll playing in the teen-age Indi- in the Youth Activities summer recreation program are reminded that registration has

Patents And Notices Of Allowability Awarded To 26



PATENT PRESENTATIONS — Capt. R. L. 27. Twenty-six NWC employees were pre-Williamson, II, NWC Executive Officer, conducted a Patent Award Ceremony at the Community Center Tuesday morning, May

sented with patents or notices of allowability in recognition of their accomplishments in various fields.

Regelson Joins

Fleet Support

Group in East

By Budd Gott

Raim Regelson, who pi-

oneered infrared countermea-

sures work at China Lake, end-

ed an 18-year career with the

Naval Weapons Center on

Regelson has transferred to

the Air Systems Command's

Logistics and Fleet Support

Group, Avionics Branch, at

Bailey's Cross Roads, Va. He

will head the Electronics Coun-

termeasures and Weapons

Control Section at that facility.

Began Career in 1951

termeasures Group of the Sys-

tems Development Department

from April 1965 until Febru-

ary of this year, Regelson be-

gan his career with the depart-

ment in 1951 as a GS-7 soon

after graduating from UCLA.

At the time of his transfer,

Regelson was serving as Con-

In 1953, Regelson transfer-

red to the Aviation Ordnance

Department where he became

which later became the Infra-

red Countermeasures Branch.

initiated research and develop-

ment programs that resulted in

the first practical infrared

countermeasure devices for

military aircraft and helicopt-

In addition, he conducted

mation Symposia (IRIS). IRIS

(Continued on Page 7)

RAIM REGELSON

While with AOD, Regelson

sultant to the department.

Head of the Infrared Coun-

Thursday, May 29.



THE SAFE WAY-AQFAN Harold J. Rogers, left, and AQFAN John P. Ames, both of VX-5, show the safe way to ride their bikes while on the way to work. Whether riding to work, or out for a pleasure spin, these men wear helmets, golves and eye protection.

Motorcycle Classes Stress Safety

Motorcycle enthusiasts are nation. invited to help themselves to held Saturday, June 7, beginning at 9 a.m. at the Traffic from Bill Faith of the Sand-Safety Building, Hussey nd blasters, 375-7745. Kearsarge on the Center.

Training in Motorcycle riding will begin the following Saturday on the dry lake bed for those who attend the lecture course.

The course is sponsored by the Community Council and members of the local Sand- Capt. M. R. Etheridge, Com- the first airborne infrared measelves or who would like help sand rider. All instructors will be provided by the two clubs.

available to the class by the Ridgecrest Honda Shop and the B&B Cycle Shop for those Capt. Etheridge will speak without machine. Approved helmets will also be worn by class members. These are furnished by Buco Corporation gram Involving the Naval Weaand Daytona Products Co. Helmets must meet Z90.1 specifications, Snell Foundation, and AMA standards.

Minors must have a release form signed by both parents ty Technical Director of NWC, and adults must also sign a

The Safety department points out that inexperience on a motorcycle is the cause of more than 20 per cent of the of Staff, who died on an expedeaths and injuries that occur dition searching for the son of on motorcycles throughout the a friend.

Further information is availthe assistance and experience able by calling Billie Hise of of expert riders in a motorcy- the Safety Department, extencle safety class which will be sion 72037, or Dick Cox of the Gypsy Wheels, 375-7221, or head of the Radiometry Branch

Commander At Luncheon

blasters and Gypsy Wheels mander of the Naval Weapons surements at China Lake using motorcycle clubs for those Center, will be the featured an F3D and a B-52 as platform who are not sure of them- speaker at a luncheon meeting aircraft. of the China Lake Chapter of In 1961, Regelson organized from an expert road rider or the American Society for Pub- and chairmanned the Infrared lic Administration, to be held Countermeasures Specialty Wednesday, June 11, at 11:30 Group of the Infrared Infor-Motorcycles have been made a.m. at the Officers' Club.

Dr. Robert Rowntree, presi- was formed for the exchange dent of the local chapter, said on "The Need for Interagency Planning in the Indian Wells Valley - a Cooperative Propons Center, the City of Ridgecrest, and Kern County." This subject should prove of interest to all, and the public is

cordially invited to attend. H. G. "Hack" Wilson, Depuwill present the R. W. Bjorklund Management Innovator of the Year Award, an annual award given in the memory of Russ Bjorklund, former Head

Employees Get Cash Awards

Capt. R. Williamson II, NWC Executive Officer, presented patents or Notices of Allowability to 26 Naval Weapons Center employees for 14 inventions at a ceremony held May 27 at the Community Center. \$1300 in cash awards were also presented at the event.

The recipients, and their aw-

John Pearson, Code 60, received a patent for an improvement in the process of explosive welding; Drs. Harold and Jean Bennett, and Edmond Ashley, Code 60, a patent for a method for measuring thin film thickness of metal; Otho Hart, Code 55, received a patent for a self-destruct fuse and Ronald Vetter, Code 45, received a patent for a smokeproducing propellant.

Dr. Martin Kaufman and John D. Braun, Code 45, received a patent for a process for preparing fluorocarbon monomers; and Kenneth Thorsted, Louis Renner and Joseph Schmidt, a patent for a propellant spin evaluation apparatus. Clinton Spindler, Code 45, received a patent for a standing detonation wave rocket engine; and Robert Dow, Code 45 and Dr. George Rice (now terminated) received a patent for a process for desensitizing metalic powders.

Awarded a patent for a sequencing switch were Robert Swallow, Code 40, and Jerry Miller, (now terminated).

Receiving Notices of Allowability were: James Blair and Richard I. Jackson, both of Code 40, for a device for the aerial dispersal of chemicals; Jack Myers, Code 40, for a bomblet; Sydney Shefler and Steven Little of Code 35, along with James Mills (now terminated) and Lee Humiston, now of NUWC, for a non-beaming

Also receiving a Notice of Allowability was Joseph Mosko Code 40, for a spiral antenna, and Ephraim Regelson and John Crecelius, of Code 30, for an exhaust-cooling system.

Assessments Due GEBA Members Prompts Mason

Members of the Government (GEBA) and the China Lake Mutual Aid Society (CLMAS) are notified that Assessments No. 178-106 and 179-107 are now due.

The assessments are for the death of Allen Gillespie (retired), formerly of Code 3025, and George Miller (retired), formerly of Code 70412.

Payments may be made to the various collectors on the Center or by mailing \$2.40 to Lawrence R. Mason, 208 Bonita St., Ridgecrest, California, 93555.

Advance payments of \$12 are acceptable to save on check costs and postage. Prompt payments are encouraged by all members.

Article 5, Section 2 of the by-laws reads: "Any member who fails to pay an assessment within 15 days after the date on which it was levied, shall become suspended and shall not be entitled to any of the benefits of the Association."



WILLIAM J. STRONGE, JR.

William J. Stronge, Jr., Code 603, was awarded a Ph.D. degree in Applied Mechanics by Stanford University in March 10, 1969.

He joined the Research Department as a Junior Professioal in June of 1960 following graduation from Oregon State College where he received a Bachelor of Science degree in Mechanical Engineering.

Stronge continued his studies here at China Lake through the UCLA Graduate Program and completed the requirements for a Master's degree in Engineering in

Stronge's studies at Stanford were conducted under an NWC Fellowship awarded in 1965. His Ph.D. research concerned "Stress Waves Caused by a Load Acclerating Through a Critical Speed" and was conducted under the guidance of Professor J. N.

This study concerns forces which move on the surface of structural elements. Transient solutions demonstrate that if the load moves with a characteristic speed of the medium, which has been termed a critical speed, the response is resonant.

The results of this study have contributed to an understanding of the significance of

Stronge, his wife Muriel and two children, a daughter "Leslie" and a son "Brent," reside at 316 Bogue Circle, China

Agood habit to get into.



Buy U.S. Savings Bonds & Freedom Shares

New UHF Telemetry System Test Success

Flexible System Passes Tests

(Continued from Page 1) gion of the radio frequency

spectrum was assigned.

Friday, June 6, 1969

New System is Flexible The new UHF telemetry system incorporates a UHF transmitter, high rate PAM commutator, thermal battery, signal conditioner, wrap-around band UHF antenna and instruments to measure missile perform-

The system is designed to take full advantage of the high reliability and compact size of the latest integrated circuits and microelectronic tech-

The high rate PAM modulation format gives the new system greater data channel flexibility and information rate than the VHF system current-

The high - rate, 64-channel, non-return to zero, PAM commutator switches from channel to channel at a rate of 100,000 per second.

Because of its compact size and flexibility, the new system with minor modifications may be adapted to many other mis-

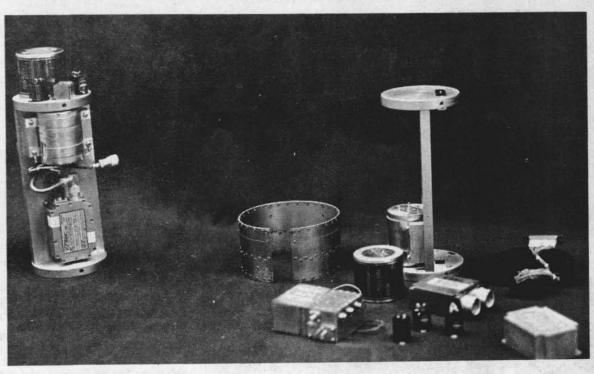
Another advantage of this

design is that it is capable of utilizing commercial "off the shelf" components or components that have been developed by the Navy such as transmit-ters and high-rate PAM com-

The new system may be used to telemeter flight characteristics aboard any of the missiles in the SIDEWINDER family; for example, SIDEWINDER AIM-9B, AIM-9C (SARAH) AIM-9D, Air Force AIM-9E, FOCUS, CHAPARRAL MIM-72A and solid state versions of both SIDE-WINDER and CHAPARRAL.

The Engineering Department's Telemetry Branch, under the direction of F. L. La Pierre, has the facilities, equipment and specially trained telemetry technicians and engineers to design, develop and implement telemetry and instrumentation systems for ground and airlaunched vehicles.

A special projectile telemetry system was recently designed and developed for the Edgewood Arsenal in Maryland and is presently being used to monitor projectile performance under a simulated projectile firing environment.



LOTS OF PIECES—Components and the frame around which they are mounted are

shown above in the right side of the photograph. The completed package is left.



ANTENNA ADJUSTMENT-Carl Peters. Electronic technician, is shown adjusting an UHF telemetry receiving antenna on a new antenna platform located on the roof

of Michelson Lab. The antenna is used to receive UHF telemetry signals from both ground and airborne vehicles at the Naval Weapons Center.



MANY PHASES INVOLVED—George Barker, Electronic Technician, is shown completing one phase of the preflight check on a VHF telemetry system modified for special Chaparral flight test. The facility shown above is located in the Michelson Laboratory, and is used for calibration, checkout and implementation of design changes on opertional telemetry systems.



DISCUSS DESIGN-Jim Rieger (r), Project Engineer, and F. L. LaPierre, Head, Telemetry Branch, discuss the signal conditioning design for the new Sidewinder/Chaparral UHF telemetry system.



LOTS OF MOBILITY — Electronic Technicians Dan Childers (I) and George Barker get ready for a trip to NAF's "Hot Line" to perform telemetry preflight checks for a

Sidewinder firing. The new mobile telemetry van wil be able to receive transmit and record telemetry information and all UHF and VHF bands in remote locations.