



CADET SGT. BRUCE L. WILSON JR. is presented Certificate of Proficiency by Captain (now major) Robert B. Thomas, Commanding Officer of China Lake CAP Squadron 84. Sgt. Wilson earned certificate for completion of aerospace course. TID employee Thomas, who has commanded the squadron since Sept. '63, was promoted to the rank of major last week.

EM Club Dance Saturday, Film Series Start Sunday

The EM Club will inaugurate the first in a series of Sunday afternoon movies for its members this Sunday from 1 to 4 p.m., according to club manager Bob Shephard.

"The Rose Bowl Story," a 73 minute length film, starring Marshall Thompson and Vera Miles, captures all the frenzied inside drama and romance behind the crowd-roaring body-bruising thrill spectacle of the Rose Bowl Game, will be the main feature.

In addition two travelogues will be shown on Tahiti and Japan plus sport shorts, Facing Danger on the Colorado River, Celebrity Softball featuring Hollywood stars. All the Greats of Big League Baseball, and Wrestling.

No Turn Out, No Series
"The Sunday film series is being coordinated through the Navy Exchange Office," Manager Shephard said. "The response we have from the membership will determine whether the series will be on a continuing basis."

Princetons Play Saturday
He also noted that The Princetons will be furnishing the music for the EM Club's dance Saturday from 8 to midnight and urged all members to attend.

'Blithe Spirit' In Rehearsal

Ken Bryson, Florence Green, and Suzanne Larsen will comprise the eternal triangle in the China Lake Players' production of "Blithe Spirit" to be staged October 2 and 3 at the James Monroe Auditorium. The show is now in rehearsal.

SHOWBOAT

FRIDAY AUG. 28
"DOCTOR IN DISTRESS" (103 Min.)
Dirk Bagarde, Samantha Egger
7 p.m.
(Comedy-Drama) When gruff, old, grouch hospital head becomes a patient he suddenly turns honey sweet—and romantic. His assistant falls for a gorgeous model. Hectic, zany men-in-white. ALSO—that ornery Roadrunner's loose again in "Wild About Hurry."
(Adults and Mature Youth.)
Short: "Wild About Hurry" Roadrunner (7 Min.)

SATURDAY AUG. 29
—MATINEE—
"DOG OF FLOODS" (97 Min.)
David Ladd
1 p.m.
Shorts: "Son of Hashimoto" (7 Min.)
"Seas Hound No. 5" (18 Min.)
—EVENING—
"STAGE TO THUNDER ROCK" (82 Min.)
Barry Sullivan, Marilyn Maxwell
7 p.m.
(Western in Color) A sheriff bringing back a robber with his loot becomes en-meshed in the lives of a group of stagecoach passengers, most of whom wish to change their lives. Big plot. Big action. (Adults and Youth.)
Shorts: "Raw Raw Rooster" (7 Min.)
"Silver Lightning" (16 Min.)

SUNDAY-MONDAY AUG. 30-31
"BEAUTY AND THE BODY" (68 Min.)
World Beauties and Adventure
7 p.m.
(Novelty in Color) Muscleman and his date visit Ice Capades, rodeo, Rose Bowl parade, bullfight, Wax Museum, surfing spot, night clubs, Jai Alai, sky divers, etc. ALSO "Disneyland After Dark"—Disney's fantasy completely changes at dark. (Adults and Mature Youth.)
Short: "Disneyland After Dark" (7 Min.)
TUESDAY-WEDNESDAY SEPT. 1-2
"MUTINY ON THE BOUNTY" (185 Min.)
Marlon Brando, Trevor Howard
7 p.m.
(Adventure in Color) The famed epic of a harsh Captain, his well bred first officer and their efforts to transport breadfruit plants from Tahiti to Jamaica. Beautiful Pacific Isles, rough and tough sail men and gorgeous native girls. Superb. (Adults, Youth and Mature Children.)

THURSDAY-FRIDAY SEPT. 3-4
"THE SEVENTH DAWN" (123 Min.)
Wm. Holden, Susannah York
7 p.m.
(Adventure in Color) Strong personal friendship of two men and a woman, all former guerrilla fighters, is torn asunder when one turns Communist aggressor in Malaya's rubber plantations. Action-suspense! (Adults and Youth.)

Response to Concert Preferential Sale List Exceeds Expectations

The response to the preferential sales list for the China Lake Civic Concert season has been so great that this list has had to be closed out until after the fall season ticket renewal sales campaign is over Earl Kirkbride, sales campaign chairman, announces.

Just under 100 names have been received for this list, the assembled members of the sales committee were told. "We are working on a figure of 81 per cent renewals of 1,086 seats available in the Station Theater," the chairman said. "This was last year's renewal rate (the highest ever in the Concert Association's history) and if the rate increases this year we can not be sure that the last few names on the preferential list will be assured of seats, so we are closing the list."

"Now we must absolutely refuse to sell any new seats until the renewal phase of the campaign is over — which is a strange position for a sales chairman," Kirkbride concluded. The announcement of the artists for the new concert season will be made at the kick-off meeting September 9. Letters asking the present season ticket holders to renew their seats will be received on September 10 and these seats may be renewed until September 26.

UCLA Counselors To Be Here Sept.

UCLA representatives will be in Room 1004 of Michelson Lab on Wednesday, Sept. 2, to counsel prospective enrollees in engineering and physical science courses. Registration for the UCLA fall semester starts on Wednesday, Sept. 8. Appointments for counseling may be made with Lois Allan by calling Ext. 71759.

Play Here Fri., Sat. At Deucey and "O" Club



THE MUSETTEERS, top accordionists, will make personal appearance here with German Band tonight at the Acey-Deucey Club and the 'O' Club tomorrow night. Both clubs will feature a German food buffet.

ComEleven Note On Civil Rights Demonstrations

Com11ND issued a note this week reminding all military personnel that they are prohibited from participating in civil rights demonstrations. "Recent demonstrations point up the need to re-emphasize to all personnel . . . to avoid and stay completely clear of any gatherings, groups or other concentrations of civil rights demonstrators. Specifically in the case of demonstrations, this prohibition includes loitering in the vicinity, and regardless of whether or not the uniform is being worn at the time," the ComEleven note said.

Commandant's Inspection

NOTS Gets 'Excellent' 11ND Rate

The broad rating of "Excellent" was awarded to the U.S. Naval Ordnance Test Station complex last Friday following an annual 11th Naval District administrative-military personnel inspection conducted throughout the week.

Some 25 areas, representing NAF and NOTS China Lake and including facilities at Pasadena, Long Beach, and San Clemente Island, were checked by a 32-man inspection team under the direction of Rear Admiral M. W. White, Commandant, 11th Naval District.

The vast majority of areas inspected drew "Excellent" marks. Three Groups 'Outstanding' A critique session, held at Michelson Laboratory Friday following personnel inspection of NAF and NOTS personnel, revealed that three Station departments or component units achieved the highest rating possible, "Outstanding."

Safety Department drew strong praise for its educational and applied programs in the industrial safety field and the results realized from the programs. The department's high standards were noted as "uniquely superior" in the District.

Central Staff's Forms and Publications unit, representing joint contributions by Technical Information Department, also won an "Outstanding" mark and lavish praise from the inspection team.

Public Information Office was the third unit to earn an "Outstanding" rating. The Navy Combat art program, national television news shows and continuing programs of community and external relations conducted by the Public Information Office drew special commendations from the inspector.

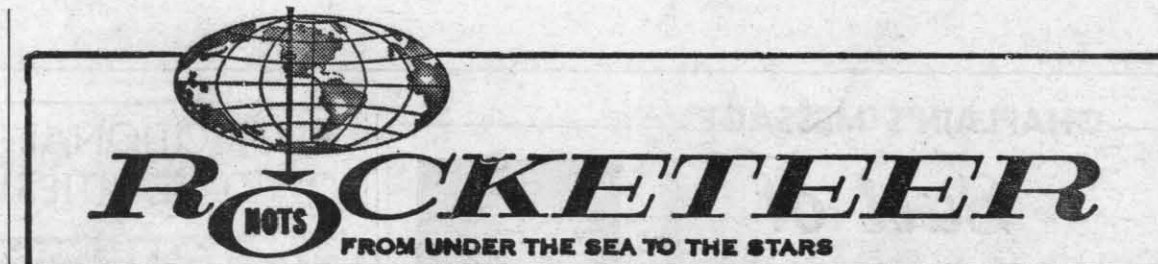
Nearly all areas inspected were commended for performances and numerous were (Continued on Page 3)

Warning On Red-Controlled Phone Calls

ComNavAirPac issued the following message to Al-NavAirPac this week:

"Past and present attempts have been made by the USSR or other Communist controlled media organizations to place direct phone calls to defense officials at the Pentagon and in the field to query about current events in the news. These conversations have been, on at least one occasion, rebroadcast to the world via Radio Moscow.

"Should telephone calls of this nature be received by your headquarters or members of your command, they should not be accepted, and the operator should be referred to the Soviet Embassy for transmission of their requests to the U. S. government."



Silberberg Back From Turkey



WEARING CLIMBING GEAR he donned for ascent of Mt. Ararat in Turkey recently, George Silberberg of NOTS' Test Dept., is welcomed home by wife, Pat, and children, Kevin, 5; Timothy, 11; Debbie, 14; and Daryl, 16. The fifth article by George on the Archaeological Foundation's expedition starts below. (More pictures on Page 5.)

Visit Here Planned By CinC Pac Flt

Admiral Thomas H. Moorer, Commander-in-Chief, U. S. Pacific Fleet, accompanied by Vice Admiral Paul D. Stroop, Commander, Naval Air Force, U. S. Pacific Fleet, is scheduled to visit facilities at NOTS China Lake Friday, Sept. 4, for a day-long briefing on key programs.

SAGA OF MT. ARARAT

Climb to The Summit

By George Silberberg



(Following is the fifth report from George Silberberg, who took leave from NOTS' Test Dept. to participate in an historic archaeological expedition on Mt. Ararat, Turkey, and the possible recovery of remnants of Noah's Ark.)

Sunday, August 2nd . . .

A group of four from the expedition left this morning by our little airplane to fly to Dogubayazit (Doe - ya - buy - a - zit) to make arrangements for horses and burros for four of us to climb the mountain the next day. I accompanied Dr. Kindall in the Unimog, a Mercedes-Benz truck designed for NATO use, to transport the supplies to the base of the mountain.

The trip from Erzurum to Dogubayazit is 177 miles over mountainous terrain. We arrived about 6 hours later and decided to set up camp at the end of the air strip.

The Challenge Ahead
Dogubayazit is a village of 4,000 people in a plain dominated by the massif of Ararat. This is the last town in Turkey before coming to the Iranian or Russian border.

dearly ill due to altitude sickness.

In fact, the reason we didn't get permission immediately to climb the mountain was because an Englishman had died of typhoid fever and a German mountain climber had broken his leg on the way up, which made the local governor very reluctant to allow anybody near the mountain.

However, Roger Brown, the cinematographer, and myself had decided we were going to climb the mountain, and I left for the base of the mountain to meet our guides long before the sun came up.

We started to climb about 8 o'clock in the morning with 20 little burros leading the way up the mountain pursued by mosquitoes and flies for the first few hours. We hadn't gone far before we ran across a puff adder, a very deadly snake which our guide killed with his walking stick.

Jennings Top 'Bluejacket'



CHARLES J. JENNINGS, AO2 'Bluejacket of the Month' Won Another Title During High School Days — 'All Around Cowboy' (Continued on Page 3)

Charles J. Jennings, a Navy aviation ordnanceman second class attached to the Naval Air Facility, has been selected for honors this weekend as the Command's "Bluejacket of the Month."

His major share of reward will be a guest visit to Bakersfield starting this afternoon and lasting through Sunday.

The Arnold, Neb., native and his wife, Judith, will have a new car at their disposal, courtesy of the Hawk Oldsmobile dealer, guest lodging and meals at the plush Holiday House, and merchants of the city will present the 22-year-old Navyman with an array of recognition gifts.

Attached to the Ordnance Division under Lieutenant Joe L. Dyer Jr., Jennings' selection was based on performance standards, attitude and uniform appearance.

In Navy Since 1959
Reporting here for duties in June 1963, Jennings had served with Patrol Squadron Two and was graduated from Aviation Ordnance School following enlistment in the Navy in Sept. 1959.

He won "All Around Cowboy" honors during high school days at Nebraska State high school, competing in rodeos as a bareback and calf-roping contestant. This month's outstanding enlisted man will be in his second year at Bakersfield Junior Col.

CROSSWORD PUZZLE
ACROSS
1-Ordinance
4-Lane
8-Ward off
12-The self
15-Two-toed sloth
16-Great Lake
17-Ventilate
18-End
19-Rosters
20-Narrated
21-Note of scale
22-Equality
23-Greenland settlement
27-Possesses
29-Prohibit
30-Delineate
31-Conjunction
32-Place
33-Dance step
34-Babylonian deity
35-Boundary
37-Chart
38-Snake
39-Prepare for print
40-Free of
41-Preposition
42-Mountains of Europe
44-Burning
47-Sieves
51-Provide crew
52-Tense
53-God of love
54-Unit of Siamese currency
56-Toward the sheltered side
58-Slave
59-Confederate general
DOWN
1-Shakespearean king
2-Exchange premium
3-Globes
4-Places
6-Chemical suffix
6-Intractable person
7-Mood
8-Part of automobile (pl.)
9-Period of time
10-Insect egg
11-River in Wales
17-Prefix: not
19-Behold
21-Stroke
24-Symbol for tantalum
25-High cards
26-Pile
27-Dry
28-Dry
29-Wager
30-Hit lightly
32-Loose
33-Cushion
38-Note of scale
37-Distance runners
38-Beast
40-Hindu queen
41-Preposition
42-A state (abbr.)
44-The camp
45-Evaluate
46-Heraldry: grafted
47-Musical as written
48-Hindu cymbals
49-Respect
50-King Arthur's lance
Answer to Previous Puzzle
Dist. by United Feature Syndicate, Inc. (2)
For Use in Authorized Service Newspapers Only.

U.C.L.A. SCHEDULE OF CLASSES

The entire semester schedule of classes is normally published in August and January of each year. There has been some delay in completing the final details of some of the courses for this Fall Semester. The UCLA and USC Program arrangements are completed, however, and

the Fall 1964 schedules appear below. The schedules for the other programs will be published in a future edition of The Rocketeer. The Fall 1964 Schedule will be distributed in brochure form to departments when arrangements for all the programs are completed.

REGISTRATION. Registration will be held 0800-1200, Tues.-Fri., September 8-18, in the Education Office, Room 1004, Michelson Laboratory. Registration fees are payable by check or money order at the time of registration. The amount of the fee is listed after each course.

GRADUATE STUDENTS IN ENGINEERING. The Department of Engineering, UCLA, requires all graduate students to complete 6 units of course work every semester until they have fulfilled the unit requirements for the M.S. Any student who completes less than 6 units is obliged to withdraw from the University, and must reapply for readmission if he wishes to continue at a later date. Leaves of absence are difficult to obtain.

COUNSELING. Advisers from the Physical Sciences and Engineering Extensions will be available to students in the Education Office, Room 1004, Michelson Laboratory, on September 2. In addition, a field trip for graduate students in active status to the UCLA campus is planned for the fall semester. The trip will give students an opportunity for a general orientation and to consult with a graduate adviser. More detailed information will be published at a later date.

USE OF OFFICIAL TIME AND/OR TUITION REFUND ELIGIBILITY. If an employee's supervisor certifies that the training is relevant to his present or projected work assignment, the employee may do one of the following: (1) If carrying 6 or more units, request permission via his departmental channels to use official time to study not to exceed 6 hours per week for 15 weeks; (2) If carrying 6 or more units and authorized to use 3 or less hours of official time to study for one 3-unit course, submit one copy of NOTS Course Enrollment and/or Tuition Refund Certification 11ND-NOTS 12410/28 prior to the first class meeting to establish tuition refund eligibility for a second 3-unit course; or (3) Submit one copy of same form to establish tuition refund eligibility for each course prior to the first class meeting.

REFUNDS. Refunds will be made under the following conditions if tuition refund eligibility has been established: (1) Successful completion (a grade of "C" or higher) of a course; (2) Withdrawals prior to the second meeting of class and presenting admission form to the Education Office; or (3) Withdrawals after second meeting and before fourth meeting — tuition refund minus \$5 will be made by the University.

WITHDRAWALS AND AUDITING. The last day for graduate students to drop courses without penalty of failure is November 30, 1964. Petition forms are available in the Education Office. The last day for extension students to audit a course (no credit) is the first meeting after the mid-term. The instructor will request each student to indicate his desired status on the first mid-term grade report. Graduate students who have dropped a course and extension students who are auditing a course may continue to attend class without the obligation of submitting homework or taking examinations.

TEXTBOOKS. Each student is responsible for purchasing his textbooks. Order blanks are available in the Education Office.

ACCESS TO MICHELSON LABORATORY. Students who do not have access to the Lab should register on or before September 11 to that they may be cleared for admittance to classrooms before the semester begins. Students unable to complete registration by September 11 should notify the Education Office giving full name, mailing address, citizenship, and the name of the courses to be taken. NO UNCLEARED STUDENT CAN BE GUARANTEED ADMITTANCE TO THE LAB CLASSROOMS UNLESS HIS REGISTRATION OR NOTICE OF INTENT TO REGISTER IS RECEIVED IN THE EDUCATION OFFICE BY SEPTEMBER 11, 1963.

PREREQUISITES. The titles of courses listed as prerequisites for the various courses in the Extension and Graduate Program are as follows:

- Engineering 15B, Elementary Mechanics
- Engineering 100A, Circuit Analysis
- Engineering 100B, Field Theory and Energy Flow
- Engineering 102B, Engineering Dynamics
- Engineering 104A, Experimental Engineering
- Engineering 108A, Strength of Materials
- Engineering 100A, Introduction to Mechanical Vibrations
- Engineering 100B, Flight Mechanics and Performance
- Mathematics 4B, Analytic Geometry and Calculus, 4th Course
- Mathematics 108, Linear Algebra
- Mathematics 110AB and C, Advanced Engineering Mathematics
- Mathematics 119 A, Differential Equations
- Physics 110A, Electromagnetic Theory
- Physics 115, Elementary Quantum Mechanics
- Physics 131, Mathematical Methods of Physics

EXTENSION PROGRAM

EXTENSION PROGRAM SCHEDULE. Courses listed on the following pages are open to all students who satisfy the prerequisites.

(*) Starred courses may, by subsequent petition, be offered toward the satisfaction of the unit requirements for the master's degree up to a maximum of 9 units.

Engineering XL 102B, Engineering Dynamics (3) \$45
 Instructor: K. Okachi, M.S., Aerospace Engineer, Weapons Development Department
 Mon.-Wed., 4:30-6 p.m., M.L. Conf. Rm. C (30 meetings, 14 Sept.-11 Jan.)
 Prerequisites: Engr. 15B or a course in analytical mechanics; statics; Math 110AB or 110C
 Text: Housner & Hudson, Dynamics, 2nd Edition, (Van Nostrand)

Fundamental ideas of dynamics; kinematics and kinetics of particles and rigid bodies; motion relative to moving reference frames; work-energy and impulse-momentum relationships. Subjects are treated in terms of modern vector techniques.
 *Engineering XL 117A, Applied Electromagnetic Theory (4) \$60
 Instructor: R. G. S. Sewell, M.A., Physicist, Weapons Dev. Dept.

Tues.-Thurs., 4:30-6:30 p.m., Training Bldg. Rm. 203 (30 meetings, 15 Sept.-7 Jan.)
 Prerequisites: Engr. 100B or equivalent
 Recommended Text: Plonsey & Collin, Principles and Applications of Electromagnetic Fields, (McGraw-Hill)

Static electric and magnetic fields, Maxwell's equations and their application to a variety of engineering problems.
 *Engineering XL 160D, Aeroelasticity (3) \$45
 Instructor: W. J. Werback, M.S.E., Head, Structural Mechanics Br., Weapons Development Department

Mon.-Wed., 4:30-6 p.m., M.L. Conf. Rm. A (30 meetings, 14 Sept.-11 Jan.)
 Prerequisites: 160A, 160B, 181A, or consent of instructor
 Text: Bisplinghoff, Ashley, Halfman, Aeroelasticity, (Addison-Wesley)

Analysis of the aeroelastic problems of divergence, control reversal, flutter, and transient response including related topics in vibrations, structures, and unsteady aerodynamics. Solutions by both assumed mode and matrix methods will be stressed.
 *Engineering XL 181A, Linear System Solutions by Transform Methods (3) \$45
 Instructor: R. M. McClung, M.S., Head, Instrumentation Division, Aviation Ordnance Department

Tues.-Thurs., 4:30-6 p.m., Training Bldg. Rm. 205 (30 meetings, 15 Sept.-7 Jan.)
 Prerequisites: Engr. 100A, 102B, 104A; Math 110C or 110AB
 Texts: Thomson, Laplace Transformation, (Prentice-Hall)
 Carslaw & Jaeger, Operational Methods in Applied Mathematics, (Dover)

Formulation and solution of equations of behavior of linear electrical, mechanical, and thermal systems by the Laplace-transformation methods. Applications of the transform method to lumped-parameter systems.
 *Engineering XL 198, Impulsive Loads—Elements and Applications, Part I (3) \$45
 Instructor: J. Pearson, M.S., Head, Detonation Physics Group, Research Department

Mon.-Wed., 4:30-6 p.m., M.L. Rm. 20108 (30 meetings, 30 Sept.-27 Jan.)
 Text: Rinehart & Pearson, Explosive Working of Metals, (MacMillan)

Part I of a course dealing with the nature of impulsive loads (such as are produced by detonating explosives and impacting projectiles); the interaction of such loads with surrounding media; the behavior of materials and the dynamics of systems under impulsive loads; techniques of study; and industrial and military applications.
 Mathematics XL 110A, Advanced Engineering Mathematics (2) \$35
 Instructor: W. B. Stelwagon, M.A., Mathematician, Research Dept.

Mon.-Wed., 4:30-6 p.m., M.L. Rm. 1000 (30 meetings, 14 Sept.-23 Nov.)
 Prerequisite: Math 4B
 Text: Sokolnikoff & Redheffer, Mathematics of Physics and Modern Engineering, (McGraw-Hill)

Ordinary differential equations and orthogonal functions, partial differential equations, line integrals, Green's theorems, vector analysis, solution of equations.
 *Mathematics XL 120A, Probability and Statistics (3) \$45
 Instructor: E. A. Fay, Ph.D., Mathematician, Research Dept.
 Tues.-Thurs., 4:30-6 p.m., M.L. Conf. Rm. A (30 meetings, 15 Sept.-7 Jan.)

Prerequisite: Math 108 or consent of instructor
 Text: Parzen, Modern Probability Theory and Its Applications, (Wiley)

Basic laws of probability, discrete and continuous random variables, expectation, distribution, limit theorems.
 *Mathematics XL 122A, Advanced Calculus (3) \$45
 Instructor: C. A. Flanagan, M.A., Mathematician, Research Dept.
 Tues.-Thurs., 4:30-6 p.m., M.L. Conf. Rm. C (30 meetings, 15 Sept.-7 Jan.)

Prerequisite: Math 108, or 110C, or 119A
 Text: Taylor, Advanced Calculus, (Prentice-Hall)
 Fundamentals of calculus from a more advanced point of view. The real number system; continuous functions. General theory and application of partial differentiation. Implicit function theorems. Vector fields. Line and surface integrals. Point set theory. Theory of integration. Infinite series. Uniform convergence. Improper integrals.
 *Mathematics XL 136, Numerical Methods in Algebraic Problems (3) \$45
 Instructor: W. B. Johnson, Ph.D., Mathematical Statistician, Test Department
 Mon.-Wed., 4:30-6 p.m., Training Bldg. Rm. 203 (30 meetings, 14 Sept.-11 Jan.)

Prerequisite: Math 119 A or consent of instructor.
 Text: Faddeeva, Computational Methods of Linear Algebra, (Dover)
 Computation with numbers of fixed precision — accuracy, round off, checking. Choice and use of tables. Applications involving approximations with polynomials—finite differences, interpolation, extrapolation, numerical differentiation and integration. Computation with continued fractions. Numerical approximation to solutions of equations.
 *Physics XL 113, Thermodynamics and Introduction to Kinetic Theory (3) \$45
 Instructor: F. K. Odencranz, Ph.D., Physicist, Research Dept.
 Mon.-Wed., 4:30-6 p.m., M.L. Conf. Rm. B (30 meetings, 14 Sept.-11 Jan.)

Texts: Sears, Thermodynamics, (Addison-Wesley) Pippard, Elements of Classical Thermodynamics, (Cambridge Univ.)
 *Physics XL 114, Mechanics of Wave Motion and Sound (3) \$45
 Instructor: G. J. Plain, Ph.D., Associate Head, Research Dept.
 Tues.-Thurs., 4:30-6 p.m., M.L. Rm. 20108 (30 meetings, 15 Sept.-7 Jan.)

Prerequisites: Physics 115, 110A, 131
 Text: Lindsay, Mechanical Radiation (1960), (McGraw-Hill)
 Fundamental aspects of wave propagation in fluids; reflection, refraction, interference and diffraction of sound. Dispersion and attenuation mechanisms; acoustic impedance; applications.
 Physics X 494, Electron Diffraction (3) \$45
 Instructor: E. G. Bauer, Ph.D., Head, Crystal Physics Branch, Physics Division, Research Department
 Tues., 6:30-9:30 p.m., M.L. Conf. Rm. C, (30 meetings, 15 Sept.-7 Jan.)

Text: None required
 Scattering by atoms and molecules, diffraction by perfect and imperfect crystals, diffraction by crystal aggregates, diffraction of slow electrons, instruments.

GRADUATE PROGRAM

GRADUATE PROGRAM SCHEDULE. The 100 series courses listed below are open to all students who have graduate status at UCLA. Courses in the 200 series are generally open only to graduate students who have rectified all grade-point deficiencies.

Engineering 117A, Applied Electromagnetic Theory
 Same as Engineering XL 117A. See above.
 Engineering 160D, Aeroelasticity
 Same as Engineering XL 160D. See above.
 Engineering 181A, Linear System Solutions by Transform Methods
 Same as Engineering XL 181A. See above.
 Engineering 198, Impulsive Loads—Elements and Applications, Part I
 Same as Engineering XL 198. See above.
 Engineering 245A, Properties of Engineering Materials (3) \$45
 Instructor: B. O. Seraphin, Ph.D., Head, Semiconductors Branch, Physics Division, Research Department
 Tues.-Thurs., 4:30-6 p.m., M.L. Conf. Rm. B (30 meetings, 15 Sept.-7 Jan.)

Text: To be announced.
 Application of solid-state physics to determination of structure and properties (mechanical) of engineering materials. Elements of X-ray structure analysis. Cohesive strength of ionic crystals and simple metals. Lattice imperfections, nonelastic behavior of solids.

Mathematics 120A, Probability and Statistics
 Same as Mathematics XL 120A. See above.
 Mathematics 122A, Advanced Calculus
 Same as Mathematics XL 122A. See above.
 Mathematics 136, Numerical Methods in Algebraic Problems
 Same as Mathematics XL 136. See above

Mathematics 120A, Probability and Statistics (3) \$45
 Instructor: E. A. Fay, Ph.D., Mathematician, Research Dept.
 Tues.-Thurs., 4:30-6 p.m., M.L. Conf. Rm. A (30 meetings, 15 Sept.-7 Jan.)

Prerequisite: Math 108 or consent of instructor
 Text: Parzen, Modern Probability Theory and Its Applications, (Wiley)

Basic laws of probability, discrete and continuous random variables, expectation, distribution, limit theorems.
 *Mathematics XL 122A, Advanced Calculus (3) \$45
 Instructor: C. A. Flanagan, M.A., Mathematician, Research Dept.
 Tues.-Thurs., 4:30-6 p.m., M.L. Conf. Rm. C (30 meetings, 15 Sept.-7 Jan.)

Prerequisite: Math 108, or 110C, or 119A
 Text: Taylor, Advanced Calculus, (Prentice-Hall)
 Fundamentals of calculus from a more advanced point of view. The real number system; continuous functions. General theory and application of partial differentiation. Implicit function theorems. Vector fields. Line and surface integrals. Point set theory. Theory of integration. Infinite series. Uniform convergence. Improper integrals.
 *Mathematics XL 136, Numerical Methods in Algebraic Problems (3) \$45
 Instructor: W. B. Johnson, Ph.D., Mathematical Statistician, Test Department
 Mon.-Wed., 4:30-6 p.m., Training Bldg. Rm. 203 (30 meetings, 14 Sept.-11 Jan.)

Prerequisite: Math 119 A or consent of instructor.
 Text: Faddeeva, Computational Methods of Linear Algebra, (Dover)
 Computation with numbers of fixed precision — accuracy, round off, checking. Choice and use of tables. Applications involving approximations with polynomials—finite differences, interpolation, extrapolation, numerical differentiation and integration. Computation with continued fractions. Numerical approximation to solutions of equations.
 *Physics XL 113, Thermodynamics and Introduction to Kinetic Theory (3) \$45
 Instructor: F. K. Odencranz, Ph.D., Physicist, Research Dept.
 Mon.-Wed., 4:30-6 p.m., M.L. Conf. Rm. B (30 meetings, 14 Sept.-11 Jan.)

Texts: Sears, Thermodynamics, (Addison-Wesley) Pippard, Elements of Classical Thermodynamics, (Cambridge Univ.)
 *Physics XL 114, Mechanics of Wave Motion and Sound (3) \$45
 Instructor: G. J. Plain, Ph.D., Associate Head, Research Dept.
 Tues.-Thurs., 4:30-6 p.m., M.L. Rm. 20108 (30 meetings, 15 Sept.-7 Jan.)

Prerequisites: Physics 115, 110A, 131
 Text: Lindsay, Mechanical Radiation (1960), (McGraw-Hill)
 Fundamental aspects of wave propagation in fluids; reflection, refraction, interference and diffraction of sound. Dispersion and attenuation mechanisms; acoustic impedance; applications.
 Physics X 494, Electron Diffraction (3) \$45
 Instructor: E. G. Bauer, Ph.D., Head, Crystal Physics Branch, Physics Division, Research Department
 Tues., 6:30-9:30 p.m., M.L. Conf. Rm. C, (30 meetings, 15 Sept.-7 Jan.)

Text: None required
 Scattering by atoms and molecules, diffraction by perfect and imperfect crystals, diffraction by crystal aggregates, diffraction of slow electrons, instruments.

GRADUATE PROGRAM

GRADUATE PROGRAM SCHEDULE. The 100 series courses listed below are open to all students who have graduate status at UCLA. Courses in the 200 series are generally open only to graduate students who have rectified all grade-point deficiencies.

Engineering 117A, Applied Electromagnetic Theory
 Same as Engineering XL 117A. See above.
 Engineering 160D, Aeroelasticity
 Same as Engineering XL 160D. See above.
 Engineering 181A, Linear System Solutions by Transform Methods
 Same as Engineering XL 181A. See above.
 Engineering 198, Impulsive Loads—Elements and Applications, Part I
 Same as Engineering XL 198. See above.
 Engineering 245A, Properties of Engineering Materials (3) \$45
 Instructor: B. O. Seraphin, Ph.D., Head, Semiconductors Branch, Physics Division, Research Department
 Tues.-Thurs., 4:30-6 p.m., M.L. Conf. Rm. B (30 meetings, 15 Sept.-7 Jan.)

Text: To be announced.
 Application of solid-state physics to determination of structure and properties (mechanical) of engineering materials. Elements of X-ray structure analysis. Cohesive strength of ionic crystals and simple metals. Lattice imperfections, nonelastic behavior of solids.

Mathematics 120A, Probability and Statistics
 Same as Mathematics XL 120A. See above.
 Mathematics 122A, Advanced Calculus
 Same as Mathematics XL 122A. See above.
 Mathematics 136, Numerical Methods in Algebraic Problems
 Same as Mathematics XL 136. See above

Mathematics 120A, Probability and Statistics (3) \$45
 Instructor: E. A. Fay, Ph.D., Mathematician, Research Dept.
 Tues.-Thurs., 4:30-6 p.m., M.L. Conf. Rm. A (30 meetings, 15 Sept.-7 Jan.)

Prerequisite: Math 108 or consent of instructor
 Text: Parzen, Modern Probability Theory and Its Applications, (Wiley)

Basic laws of probability, discrete and continuous random variables, expectation, distribution, limit theorems.
 *Mathematics XL 122A, Advanced Calculus (3) \$45
 Instructor: C. A. Flanagan, M.A., Mathematician, Research Dept.
 Tues.-Thurs., 4:30-6 p.m., M.L. Conf. Rm. C (30 meetings, 15 Sept.-7 Jan.)

Prerequisite: Math 108, or 110C, or 119A
 Text: Taylor, Advanced Calculus, (Prentice-Hall)
 Fundamentals of calculus from a more advanced point of view. The real number system; continuous functions. General theory and application of partial differentiation. Implicit function theorems. Vector fields. Line and surface integrals. Point set theory. Theory of integration. Infinite series. Uniform convergence. Improper integrals.
 *Mathematics XL 136, Numerical Methods in Algebraic Problems (3) \$45
 Instructor: W. B. Johnson, Ph.D., Mathematical Statistician, Test Department
 Mon.-Wed., 4:30-6 p.m., Training Bldg. Rm. 203 (30 meetings, 14 Sept.-11 Jan.)

Prerequisite: Math 119 A or consent of instructor.
 Text: Faddeeva, Computational Methods of Linear Algebra, (Dover)
 Computation with numbers of fixed precision — accuracy, round off, checking. Choice and use of tables. Applications involving approximations with polynomials—finite differences, interpolation, extrapolation, numerical differentiation and integration. Computation with continued fractions. Numerical approximation to solutions of equations.
 *Physics XL 113, Thermodynamics and Introduction to Kinetic Theory (3) \$45
 Instructor: F. K. Odencranz, Ph.D., Physicist, Research Dept.
 Mon.-Wed., 4:30-6 p.m., M.L. Conf. Rm. B (30 meetings, 14 Sept.-11 Jan.)

Texts: Sears, Thermodynamics, (Addison-Wesley) Pippard, Elements of Classical Thermodynamics, (Cambridge Univ.)
 *Physics XL 114, Mechanics of Wave Motion and Sound (3) \$45
 Instructor: G. J. Plain, Ph.D., Associate Head, Research Dept.
 Tues.-Thurs., 4:30-6 p.m., M.L. Rm. 20108 (30 meetings, 15 Sept.-7 Jan.)

Prerequisites: Physics 115, 110A, 131
 Text: Lindsay, Mechanical Radiation (1960), (McGraw-Hill)
 Fundamental aspects of wave propagation in fluids; reflection, refraction, interference and diffraction of sound. Dispersion and attenuation mechanisms; acoustic impedance; applications.
 Physics X 494, Electron Diffraction (3) \$45
 Instructor: E. G. Bauer, Ph.D., Head, Crystal Physics Branch, Physics Division, Research Department
 Tues., 6:30-9:30 p.m., M.L. Conf. Rm. C, (30 meetings, 15 Sept.-7 Jan.)

Text: None required
 Scattering by atoms and molecules, diffraction by perfect and imperfect crystals, diffraction by crystal aggregates, diffraction of slow electrons, instruments.

Tortuous Climb of Mt. Ararat

One Man Goes Snowblind in The Ascent

(Continued from Page 1)

miles away by a visiting tribesman.

There were now six of us in base camp, five experienced mountain climbers and myself. I had visions of spending about a week resting and getting acclimated at base camp, but these thoughts were soon shattered for I was told we were to move to the high camp in the morning. These men had waited two weeks for us to catch up with them and were very anxious to get onward and upward.

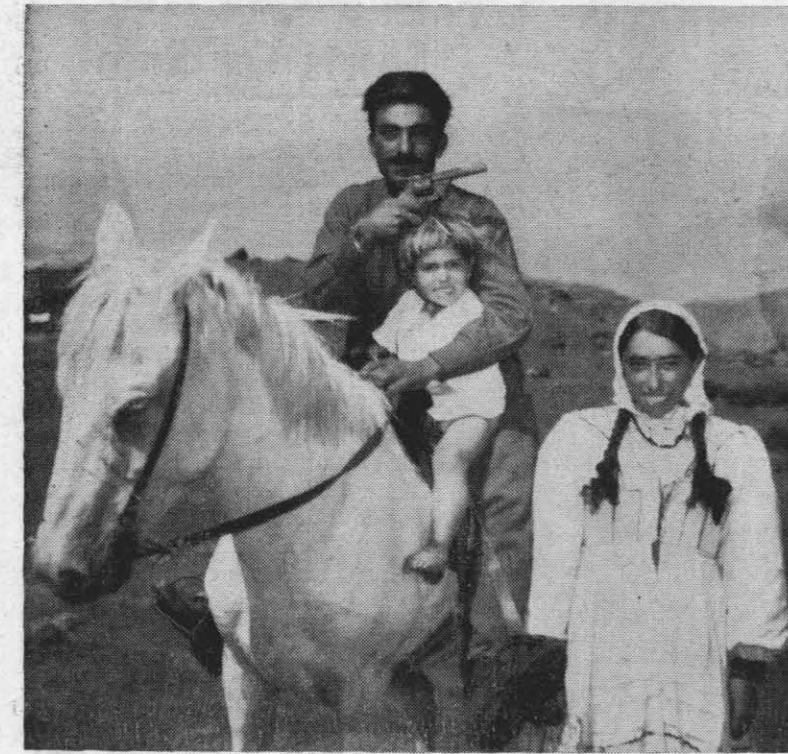
The next morning they decided that someone should stay in camp to guard all the equipment from marauding tribes, and I eagerly accepted the job for I thought I would have a chance to acclimate myself. I watched the other five disappear over the hill to Lake Kop, and I settled down to tend to camp chores.

Critical Decision
 Around noon two other members of the expedition arrived at base camp and since they had no desire to go any further, I decided to try to hike up to upper camp by myself. I didn't know where the upper camp was exactly, but I knew it was 4,000 ft. up over very treacherous rock slides and glaciers.

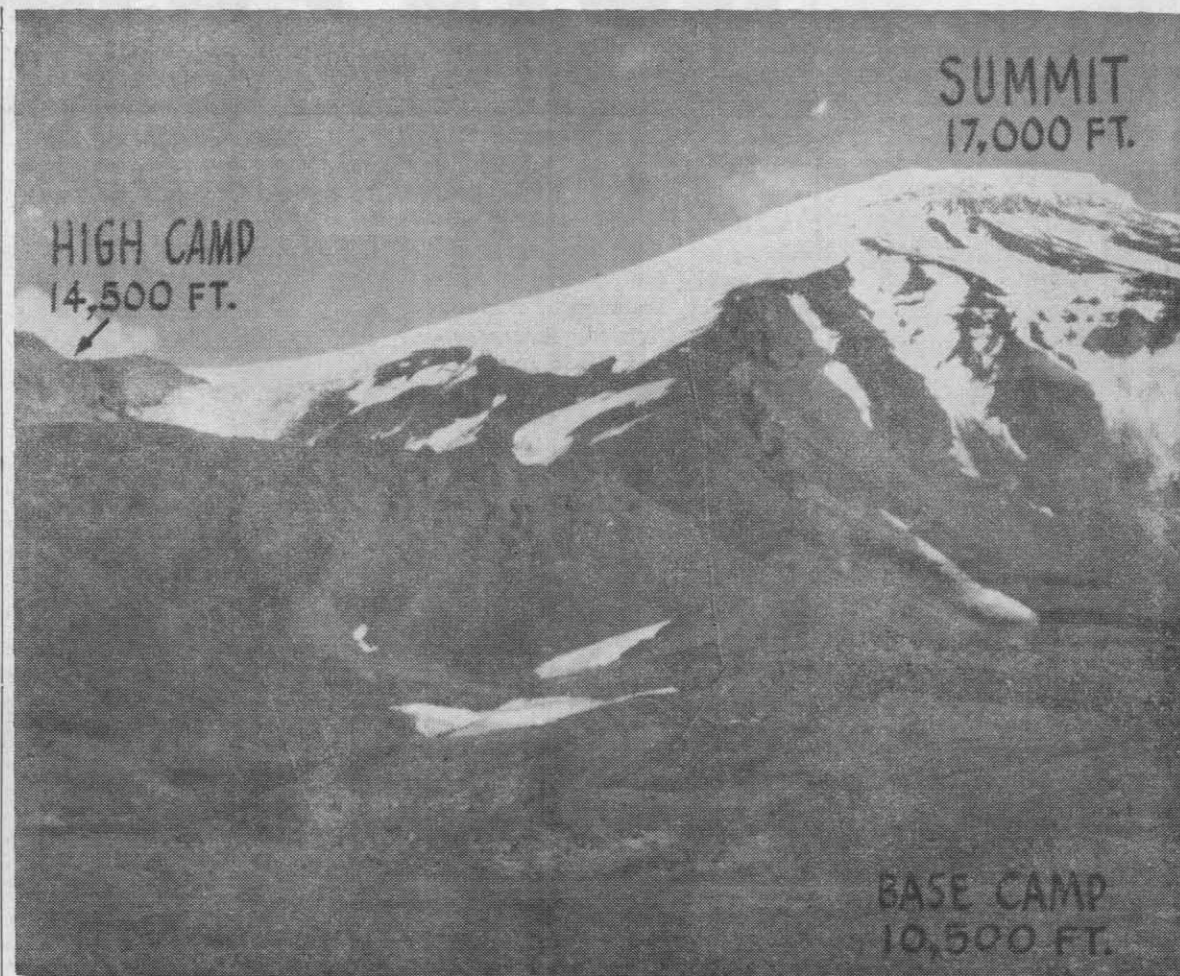
This was really a foolish thing to do because the weather becomes very violent in the afternoon and if it had closed in on me I would have had to find shelter under a rock and survive the night with the bears and the wolves, which are numerous in that area.

However, I dragged into upper camp before dark, much to the amazement of the other five, and collapsed on a rock completely exhausted! I managed to eat half a can of salmon and drink a cup of tea that night which seemed to nourish me back into high spirits again. Since there were only two 2-man tents, and six of us at high camp, sleeping conditions were a little cozy, and needless to say, none of us got any rest at all.

View of Russ Frontier
 The wind blew and the temperature dropped to around 10 degrees F, and four ft. of fresh snow covered the ground when dawn broke the next morning.



ALLIE'S BROTHER enjoyed brandishing his revolver when Silberberg aimed his camera. Allie and his family live in a Kurdish village at the 8000-ft. level.



MT. ARARAT, as seen from base camp (10,500 ft.), looms as a formidable challenge. The summit (17,000 ft.) is hidden by the ice-packed peak at right. At far left in rocky saddle is

the high camp at 14,500 ft. Silberberg made the ascent, alone, from base to high camp, then joined five others in climb to the summit.

Our high camp commanded a tremendous view of the entire frontier of Russia. We could look down on the town of Erivan and I'm sure the people there could see us in our bright down jackets against the white snow background.

The weather that morning looked good to the climbers for an assault to the summit. I asked them to let me rest more and catch my breath but they were determined to go. I tightened my boots and tried to forget about the blisters. I had never climbed on snow and ice before and didn't know how I would function at this very high altitude. I strapped my crampons on, tied a rope around my midriff and eased on the ice with my two companions who were tied to me with 100 feet of strong, nylon rope.

Every step was a potential trip into bottomless crevasses, but I had the assurance of the man in front of me that I would only fall the length of the slack in the rope. Needless to say, I kept the slack at a minimum. However my only thoughts at the moment were to get to the top, still breathing.

Walking on the ice was much

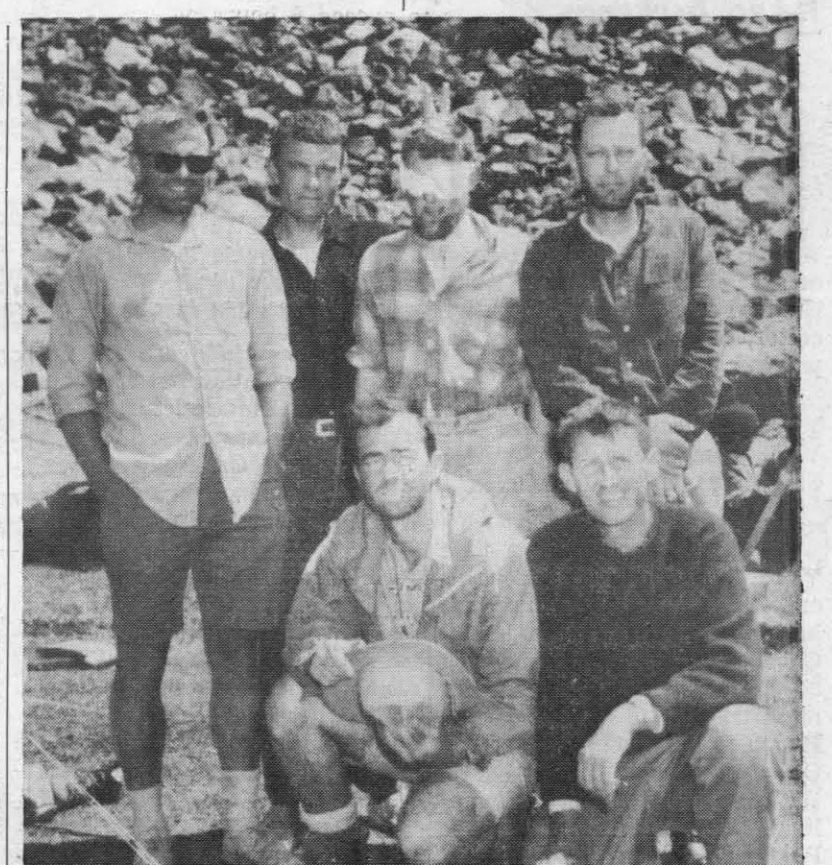
easier than I had envisioned.

On the Summit
 After searching the entire northeast side of the mountain, we finally reached the summit. The wind was blowing about 40 knots and the clouds kept the temperature down around 20 below zero. The elevation was very close to 17,000 feet but I found breathing no more difficult than at the 10,000 ft level. We proceeded to bury an ice ax on top so that those who brought flags could tie them securely. After taking pictures and congratulating each other, we headed downward with me in the lead. The descent was much easier, in fact I found that running got me there faster. But I was soon slowed down by my companions, for had I tripped on the slope we all would have hurled 3000 ft. down the glacier.

When we arrived at camp, we discovered that one of the climbers had made the ascent without dark glasses and was beginning to feel the effects. We quickly broke down the upper camp and headed for our 10,500 ft. camp. I had forgotten how far it was and soon fell far behind the others, even though they were carrying upward to 80 lbs. The sun had set long before I came dragging into camp, where I immediately climbed into my sleeping bag and passed out, but smiling triumphantly.

The Hazardous Search
 The next few days were spent searching the ends of the glaciers where deep blue crevasses could easily hold the secrets of the ark. This was found to be an extremely hazardous task due to the risk of getting down inside and having the entire ice wall collapsing on you. Huge boulders kept crashing down the glacier as the sun would free them from their icy prison. The warm season had finally turned the entire ice cap into a moving mass of blue ice, and water was beginning to appear everywhere. It was a good thing we had climbed the ice cap when we had, for I doubt that it could have been climbed in this melting condition now.

Our climbing companion had



AFTER THE CLIMB—Back in base camp after their ascent of Mt. Ararat are (l-r, front) Roger Brown of Vail, Colo., and George Silberberg of NOTS; (rear, l-r) Dick Pownall and Dr. John Lunt of Denver; Gordon Mansell of Sherwood Forest, England, who was snowblind, and Bud Crawford, Denver.

by this time developed snowblindness to a point where we became very alarmed. When I looked into his eyes and saw nothing but masses of infection, I was convinced that he would go blind. Our mountain climbing doctor thought it best that we get our blind friend to a hospital as soon as possible.

That evening three left for the valley to make arrangements for horses and donkeys for us. They had huge packs on their backs and were quite brave to start off at the time (4 p.m.). Walking is treacherous from base camp to the bottom with many rocky washes and slides to cross. There were five of us left in camp and we prepared a spaghetti dinner that night — sauce and all.

Told of Injury
 Our Turkish interpreter showed up with four horses and two guides. He informed us of Dick Pownall's son being injured and that he would have to

Six China Lakers Enjoy Music Camp

Four new scholarship winners and two previous winners from China Lake returned recently from a 10-day stay at Arrowbear Music Camp.

Attending for the first time this year on scholarships were Wendy Sorensen, Gary Arnold, Steven Fountain and Joe Malory. The two who had gone there previously and liked it so much that they returned again this year were Pat Dalbec and Susan McEwen.

The scholarships were provided by the Music Parents Club.

During the China Lakers' 10-day stay there they gave three performances, at the camp and at Santa's Village, Arrowhead.

Public Works' Men Attend Safety Meet

Two Public Works' Transportation Division men, Walt Wilson, Operations Branch Head, and Bobby Brown, Personnel Transport Section Head, attended the 21st Annual Fleet Safety Meet held at the Roger Young Auditorium in Los Angeles last Wednesday.

The meet was sponsored by the Greater Los Angeles Chapter of the National Safety Council.

Featured speaker was National Safety Council's Edmund Fletcher who spoke on "Driver Selection and Driver Training."

(To Be Continued)



I. Leo Ashkenas

Guard Named Editor Of Calif. VFW Paper

Volume 40, Number 1 issue of "The California Veteran" was of special pride to I. Leo Ashkenas, a member of the Pasadena Guard Force for the past nine years. It was his first issue as editor, having recently been appointed to this position.

The California Veteran, a VFW publication, goes to all VFW members in the State of California, 53,000 of them.

Active Since 1946

Leo has been active in the VFW since 1946. Besides his current position as Editor, he holds several other positions—Quartermaster of Azusa Post 8070, Junior Vice Commander of District No. 6 (covering from Pasadena to the San Bernardino County line and from South Whittier to the Kern County line), as well as being with the Public Relations Department for the southern half of California. He also serves on numerous youth committees.

Winners Told

Bowlers End Play in Summer League

NOTS Friday Nighters Bowling League ended the summer season last week in close competition. Team taking first place by one and one-half marks was the Tigers — Bill and Irene White and Jack and Dawn Kindred.

Second spot was taken by the El Toros — Leonard and Nova Semeyn, Phil Foster, and Sam Brown.

Third place winner was the Channel Kats — Jim and Phyllis Henry and Al and Jane Caghagen. Fourth place, the Beatles — Jack and Norma Sayre and John and Dory Aitchison.

Season Honors

Honors for men's scratch series for the season go to Bill White with 605; handicap series to Len Semeyn with 650.

Jim Henry with 234 takes honors for high scratch game. With 254; high handicap game

is held by John Aitchison. On the distaff side, women's scratch series goes to Jane Caghagen with 548; handicap series to Dory Aitchison with 671. Holding high scratch game is Irene White with 216, who also takes high handicap game with 258.

Trophies for most improved bowlers go to Jim Henry and Dory Aitchison.

Sweepstake Honors

El Toros took first place in team play in the sweepstakes with Beatles second.

Mixed doubles—Nova Semeyn and Phil Foster with 1218, with second place to Jack and Norma Sayre with 1179.

Men's singles were taken by Phil Foster, with Al Caghagen second.

Women's singles were won by Phyllis Henry, with Nova Semeyn second.

NOTS Pasadena

VIRGINIA E. LIBBY — EXT. 638

PROMOTIONAL OPPORTUNITIES

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

Guard Supervisor, GS-7, PD: 24922 Am 1, Code P1914 — Incumbent has administrative and technical supervision of a guard force consisting of 5 sergeants in charge of shifts and 14 patrolmen on 24-hour duty. Responsible for physical security of all plant and classified material at Foothill, Morris Dam, Long Beach Range, and San Clemente Island.

PERSONNEL STATISTICS

New Employees

Administration — Franklin Lovell and Pasquale J. Ferraro, Guards.

Public Works—William Gentner, Plumber, and John W. Hancock, Carpenter.

Underwater Ordnance — James M. Alsup, Physicist; Leon A. Barton, Apprentice Machinist; Anthony J. Durand, Electronic Mechanic; and Roland H. Schuh, Jr., Electronic Engineer.

Terminations

Supply—Hal Whilite, Stockman.

Public Works —Peter Keuning, Machinist.

Underwater Ordnance — Melvin Sweet, Mathematician.

Seat Belts

Front seat belts are now standard factory-installed equipment on all cars made by U.S. manufacturers.

Ships Over For Four



CHIEF FRANK J. FRENCH (r) is reenlisted by Lt. (jg) R. F. Bell, Assistant Diving Officer at the NOTS Diving Division, Long Beach.

Frank J. French, BMCM (Dv), USN, recently reenlisted at NOTS Pasadena for four years. Chief French is a Master Diver at the NOTS Diving Division,

Long Beach, and is responsible for directing and supervising diving operations at San Clemente Island and Morris Dam.

He entered the Navy in March 1938 and his first sea duty was aboard the USS Portland (CA 33). He completed Deep Sea Diving School, Washington, D.C. in March 1944, then was assigned to the U. S. Naval Mine Warfare Test Station in the Solomons.

Chief French reported to NOTS from the USS Florikan (ASR 9) in August 1961.

He and his wife, Virginia, and their two youngest children reside in San Diego.

Berghagen Wins Sports Car Race

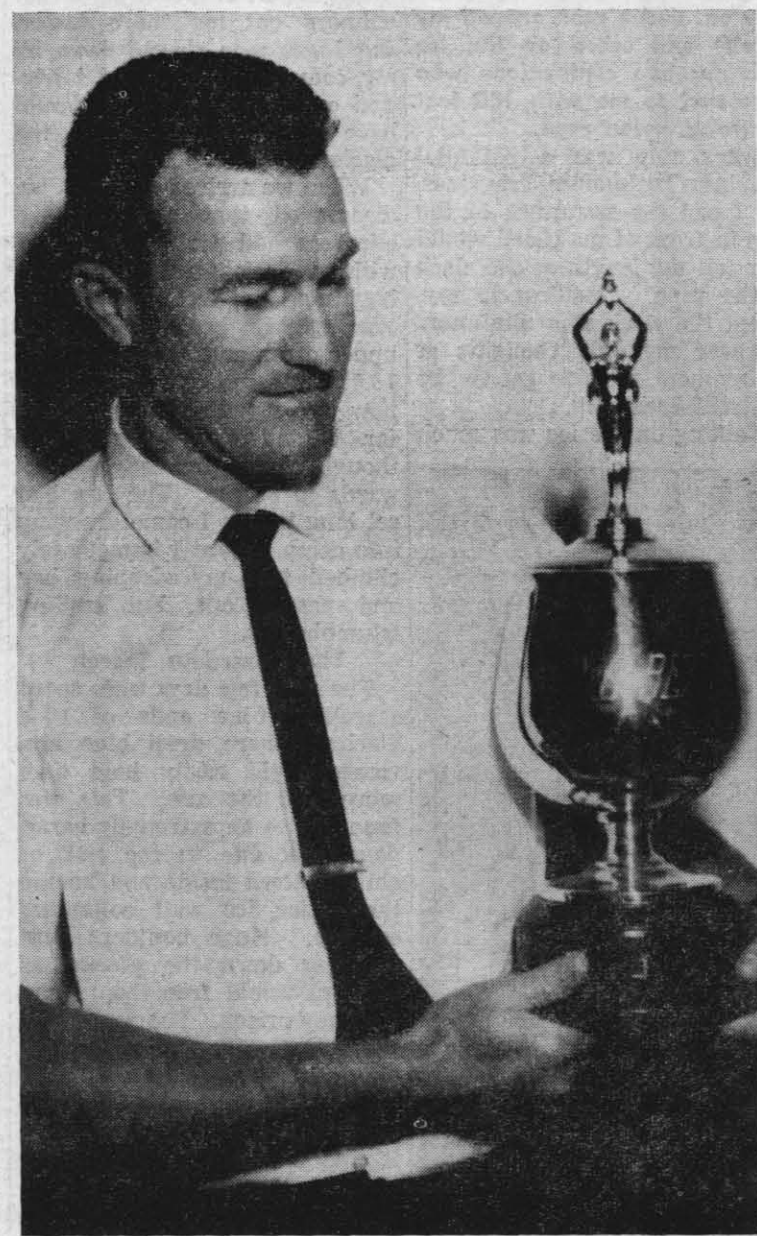
Lloyd C. Berghagen, an Industrial Specialist in Engineering's Industrial Process Branch, has another specialty — sports car racing.

And to show for his newly acquired sport is a tall silver trophy. Lloyd has held his competition driver's license only since last Christmas.

Driving an Alfa Romeo Spider Veloce, Lloyd was recently on the winning relay team in the Olympic Fund Road Races held at Riverside International Raceway.

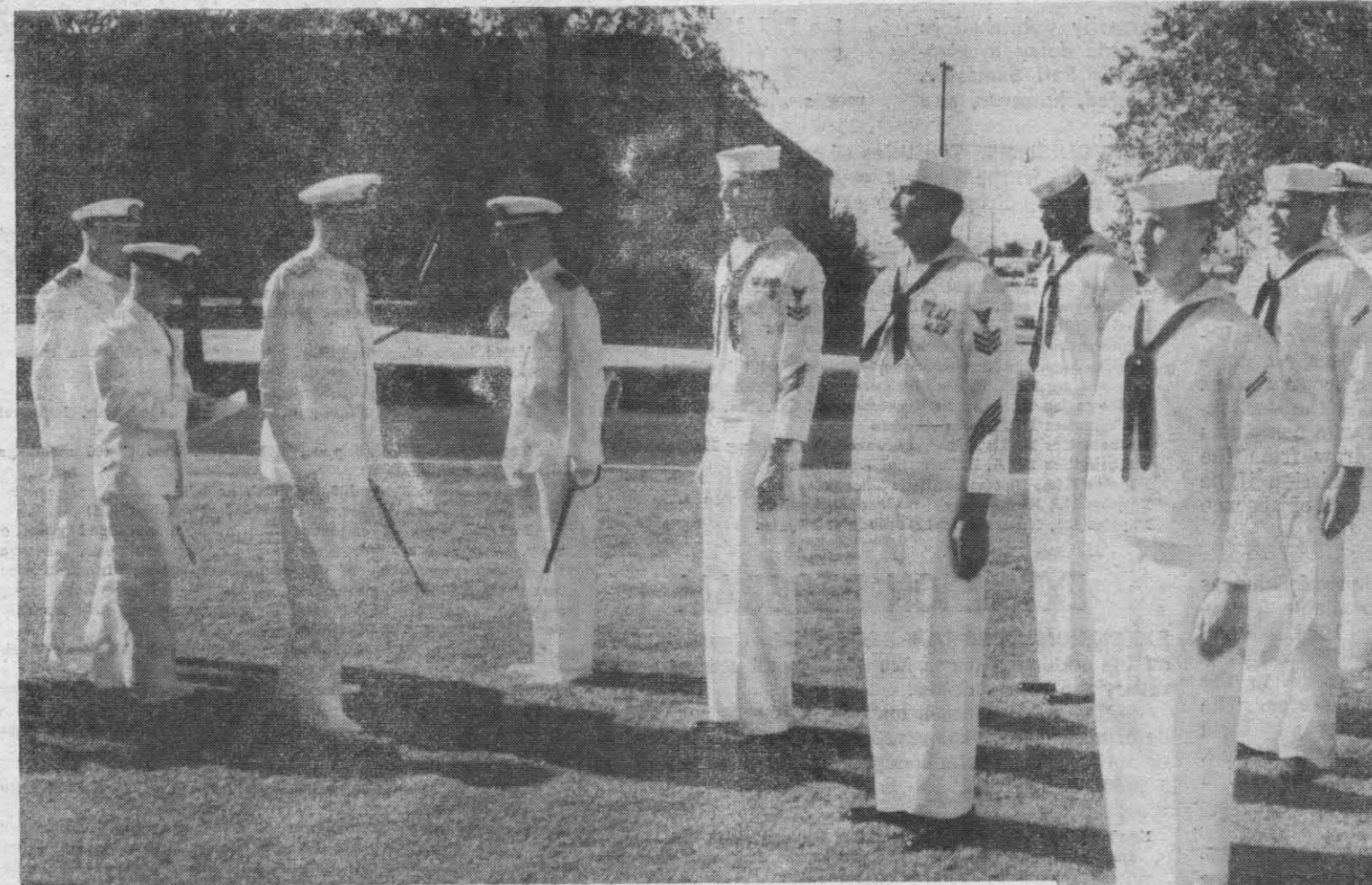
Previously, he came in eighth in a field of 20 after a "spin-out" at San Luis Obispo the middle of August. He has his sights set now on a win at Laguna Seca in Monterey in October.

Lloyd does all his own overhaul and engine rebuilding work.



LLOYD C. BERGHAGEN displays sports car race trophy

Three Groups 'Outstanding' in Inspection



(Continued from Page 1) cited for special contributions. Among those was the Supply Department's Free Bin and Shop Stores systems.

Special Praise

Administration both at NOTS China Lake and NAF were rated "Excellent," as was NOTS Personnel Department. The Information and Education programs conducted at the Naval Air Facility, rated as "Outstanding," commanded special praise from the inspector and were cited as a material contribution to personnel of that command.

Public Works at China Lake scored an "Excellent" along with component units at Pasadena and San Clemente Island.

A thorough, written critique is scheduled for distribution to appropriate officials here within the next two weeks.

Bluejacket . . .

(Continued from Page 1)

lege, Desert Division, when sessions start next month.

"I like the Navy life very much, but I want eventually to return to the University of Nebraska for a degree in agriculture," he commented this week.

Jennings and his wife live at 232 Segundo.

Price in England To Present Paper

E. W. Price, Head, Aerothermochemistry Group, Research Department, presented an invited paper "Experimental Solid Rocket Combustion Instability," at the Tenth International Combustion Institute Symposium in Cambridge, England last week.

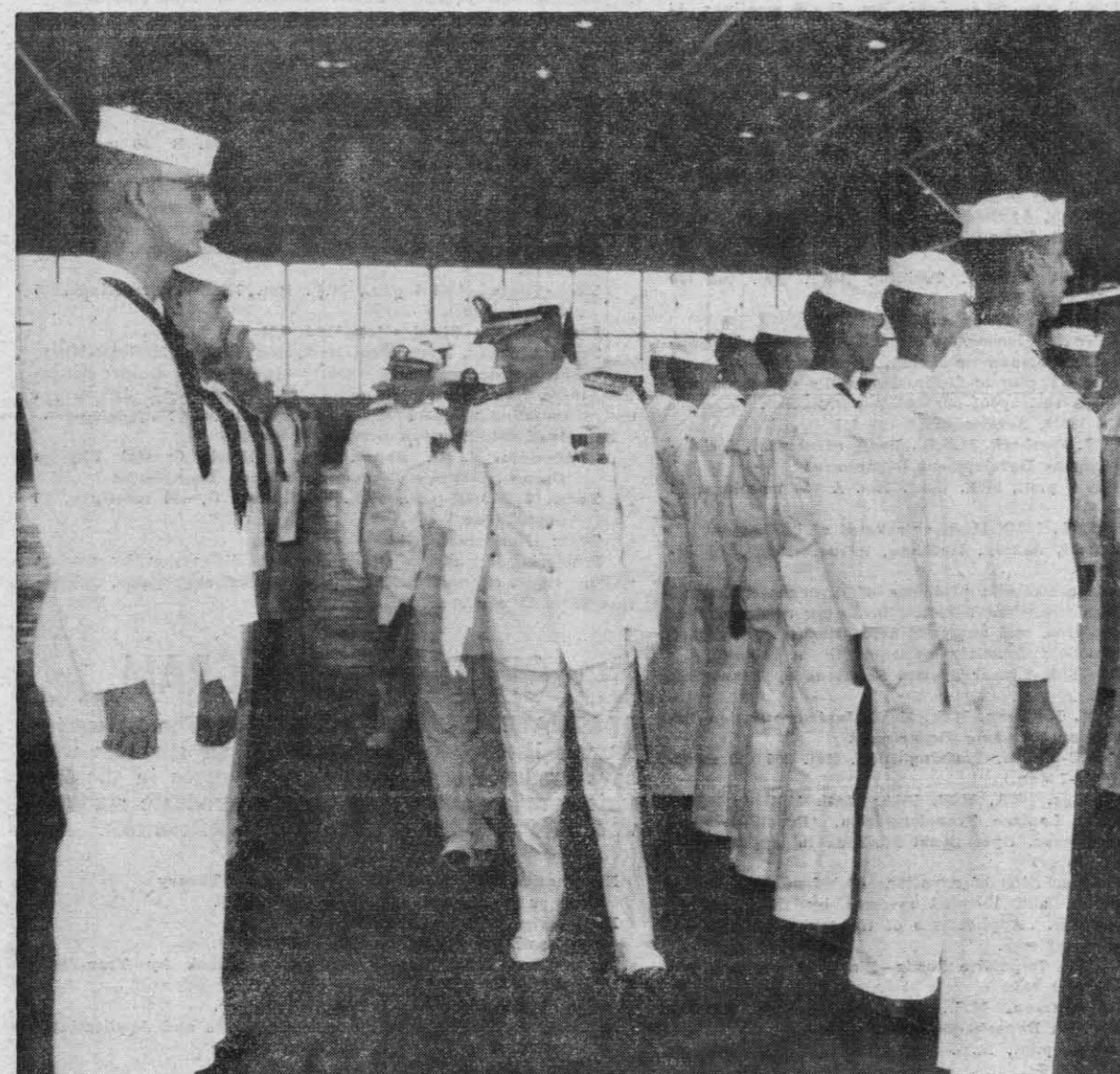
His paper, a complete survey of the combustion instability problem, was enthusiastically received.

Because of the current interest among government - sponsored investigators regarding this subject, his paper has also been published as a NOTS report and has been given wide distribution.

Down 25,400 Since '62

Federal civilian employment delined by 25,400 between the end of July 1963 and the end of July 1964, the White House has announced.

The Federal civilian employment total last month was 2,479,528. This was 19,600 below July 1962.



MILITARY PERSONNEL underwent inspection by RAdm. M. W. White last Friday morning as a climax to annual admin/military check. (Top) Lt. (jg) M. E. McGovern greets inspection party checking NOTS Enlisted Division personnel. Capt. John I. Hardy (far left) accompanied RAdm. White. (At left) NAF personnel stood Commandant's inspection earlier in the morning. Capt. Robert R. Yount (third in line) escorted visiting flag officer through ranks.

To Salute Military At L. A. County Fair

Armed Forces and America's military might will be saluted on the first Sunday of the Los Angeles County Fair, Sept. 18-Oct. 4, at Pomona.

The fair will pay special tribute to the men and women of the United States armed services Sunday, Sept. 20, with special entertainment and free entrance to the grounds for all in uniform.

A 'Well Done' From Capt. Hardy to All

Printed in the news pages of The Rocketeer this week is a summation of the annual Admin/Military inspection conducted by the Eleventh Naval District. I would like to express my sincere appreciation to Civilian and Military personnel who participated in this event, and to all those whose efforts made possible the overall grade of Excellent given to the Station.

Contrary to a time-honored belief, inspections are not conducted for the purpose of finding fault; instead, the ultimate objective is to determine areas of weakness and establish methods and procedures of improvement. This can be best achieved through the use of inspecting teams from the parent organization. I believe that my command was given the closest possible scrutiny by the COM 11 inspection team headed by the Commandant, RAdm. White, and I am very proud of the final rating assigned.

Because I have served previously at NOTS, and am well aware of the hard work, and excellent results, I would like to add my personal endorsement to the official rating. "WELL DONE!"

CAPT. JOHN I. HARDY, USN ComNOTS



ONE CENTURY OF FEDERAL SERVICE is represented by these Engineering Department employees as Department Head Kel Booty presents them with 20-year pins. Em-

ployees (l-r) are Nellie Fike, Bill Rice, Stan Creasy, and Art Pahkama. Pins were awarded at Department meeting.

CHAPLAIN'S MESSAGE

Salt of The Earth

By CHAPLAIN MARK E. FITE



The 1964 school year opens soon. There will be new classmates, new subjects, new activities and a multitude of exciting things for everyone.

I overheard two teenage boys talking seriously. One said, "I have not been very popular this week, I've just been kinda usual." I think what he really meant by this statement was that he had not been in the limelight all the time nor had he tried to be so.

It is certain that not everyone will be above average in all things. Nor will any person be constantly in the limelight. There inevitably must be the time one acts "kinda usual."

There are some things quite common and usual but their value is everlasting. Salt and light are used each day and we are very dependent on them.

These are abiding qualities that do not fluctuate. They are the ones that make life worth living, while certain popular ideas have their day and pass on.

Incidentally — this may be good reading for you before you enroll in your new class (Matthew 5, 6 & 7).

China Lake Film Society Lists 1964-65 Programs

The China Lake Film Society announced its selection of programs for the 1964-65 season this week.

All the films will be presented at the Community Center beginning at 8 p.m. The ticket-selling campaign starts next Monday, with full-season tickets going for \$5 and half-season membership at \$3.

Sales representatives on station are:

Dwight Holford, Code 11; Wayne Melton and Roy Metcalf, Code 12; Eleanor Johnson and Sandy Schmick, Code 17; Helen Tarpe, Code 30; Bob Young, Code 40; George Handler, Tom Garcia and Len Pemberton, Code 45; Angie Damico, Code 50; Margie Rosenberg and Larry Mesple, Code 55; Jack Webb, Code 65; Charles Nordone and Dick Johnson, Code 75.

In Ridgcrest tickets may be purchased from Deone Ayres and Lynda Bussolini, employees at the Bank of America.

Tickets will also be available in front of the Navy Exchange for two weeks beginning August 31.

Following is the schedule of films: Sept. 14 and 15 - RIFIFI, a French mystery. Oct. 12 and 13 - MAN IN A COCKED HAT, spoof on diplomacy. Nov. 9 -

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.

Clerk-Typist, GS-322-4, PD 18449 Am-1, Code 1760—Incumbent provides general office services for the Accounting Division. Acts upon routine correspondence requesting project data, technical studies and reports, and loan of documents. Reviews and coordinates incoming hardware and other communications, etc.

Required Experience: Two years progressive responsible experience. Electronic Engineer, GS-855-13, Code 163—This position is located in Air Force's Systems Command Scientific and Technical Licensure Office, Mich. Lab. Incumbent reviews and analyzes research and development being performed by the Station to keep informed on results of all endeavors which may have application toward meeting Air Force requirements.

Evaluates status of information relative to current capability by the application of broad knowledge of state-of-the-art in weapons systems, hardware and processes and techniques in associated technical areas.

Makes the determination of what technical data is of interest to the Air Force organizations based on the thorough knowledge of requirements, disseminates applicable data to appropriate Air Force personnel through publication in Research and Technology Notes, correspondence, telecommunications and personal contact.

File for above with Janet Thomas, Room 26, Bldg. 34, Phone 72723.

Mail and File Supervisor, GS-5, PD 17340, Code 8514—Responsible for the production and day-to-day operations of the employees in the Central Station Mail Room. Supervises the routing, distribution, and filing of all official incoming and outgoing correspondence, assumes difficult research problems, makes studies, trains new employees, and determines disposition of obsolete records.

Qualifications Required: In addition to 1 1/2 years' experience in general office-clerical functions, applicants must possess 1 1/2 years' experience in mail and file work as related to mail room operations.

Warehouseman, 52.62 to 52.84 per hour, Code 2591—Performs a variety of tasks in connection with the physical receipt, storage, or issuance of supplies. Receives, checks, stores, counts, or assembles supplies of all types in accordance with established supply systems, procedures and methods.

Qualifications Required: At least six months' experience in duties described above. Applicants can only be accepted from those already working for Civil Service or those who have reinstatement rights.

File applications for above with Pat Detling, Room 26, Bldg. 34, Phone 72716.

General Engineer, GS-801-11 or GS-12, PD 055068, Code 5564—Makes engineering evaluations of drawings and specifications to insure function and producibility of newly developed weapons systems and items. Maintains liaison with vendors regarding producibility and deviation revisions. Supervises personnel who prepare drawings and specifications. Must be familiar with aerospace engineering practices and related military specifications.

Qualifications Required: BS in Engineering and at least three years aerospace engineering experience covering processes, materials, design, and specifications. Must be able to supervise and deal with contractors and in-house personnel.

Engineering Technician or Junior Engineer, GS-802-9 or GS-11, PD 12989, Code 5564—Performs lower level duties similar in kind to the following: Makes engineering evaluations of drawings and specifications to insure function and producibility of newly developed weapons systems and items. Maintains liaison with vendors regarding producibility and deviation revisions. Supervises personnel who prepare drawings and specifications. Must be familiar with aerospace engineering practices and related military specifications.

Qualifications Required: BS in engineering and at least one year aerospace experience or if a technician should have at least five years engineering technician experience covering processing, fabrication, drafting, specifications and production engineering.

File applications for above with Dora Childers, Bldg. 34, Room 32, Phone 71393.

Police Supervisor, GS-7, PD 284913, Code 843—Incumbent supervises and manages Police Watch, maintains order, enforces laws, conducts preliminary investigations, and makes arrests. Incumbent is subject to watch rotation.

File applications for above with Pat Detling, Bldg. 34, Room 28, Phone 72676. Deadline is September 8.

DESERT PHILOSOPHER

Bristlecone Pine Facts

By "POP" LOFINCK



The ancient Bristlecone Pine Forest in the White Mountains of the Inyo National Forest is of worldwide interest; because in this forest are the oldest known living things on earth.

Not the biggest — but the oldest. The giant Sequoias in the Sierra are the biggest. The dwarf Bristlecone Pines are much older than the giant Redwoods.

Many are over 4000 years old. One is over 4600 years old. In 1953, Dr. Edward Schulman, Associate Professor of Dendrochronology, Laboratory of Tree-Ring Research of the University of Arizona, with Professor Frits W. Went of the Earhart Plant Research Laboratory of the California Institute of Technology (CalTech to you), went into the White Mountains of California to check on rumors of old trees there.

They study tree rings to make a chart of the changing climatic conditions over past millennia to predict what the climatic conditions will be in the future. This study was made possible by a grant from the National Science Foundation.

NOT SO OLD IN NEIGHBORING STATES

There are Bristlecone Pines in Utah, Nevada and Arizona but none so far discovered to be as old as this White Mountain area.

Dr. Schulman worked in the White Mountains for several years. He worked so hard at the high altitudes that his heart gave out, but I think he must have died happy, since he found and dated the oldest living thing. The Forest Service named the grove as a memorial to him.

The age of trees is determined from the growth rings — trees add a growth ring each year. In dry years, a thin ring; in wet years, a thicker ring.

CORE BORED FOR STUDY OF AGE

A core is taken from the tree with a special tree boring instrument made in Sweden — about 1/4" in diameter. This doesn't do the tree any harm. The core is then glued to a wooden stick — shaved with a razor and the rings counted and studied under a microscope. Also Carbon 14 tests are made, as a backup.

So — California retains the championship of the oldest known living thing on earth. And the biggest living thing is the giant Sequoias in the Sierra.

The oldest Bristlecone so far discovered — 4600 years plus — began growing before the Egyptian pyramids were built. It's been right there all the time. And it still produces pine cones occasionally and the seeds grow.

California seems to have a sort of monopoly of bigness and oldness. And it's only about 80 air miles from the oldest Bristlecones to the biggest Sequoias. Interesting!

BRISTLECONES LIKE ALKALINE SOIL

Bristlecones grow in a calcareous or dolomitic lime stone soil which is very alkaline. Nearly all other pines grow in acid soil — that's odd. The limestone is very white in color — that's the way the White Mountains got their name.

In a rain forest the biggest trees are the oldest. But the biggest Bristlecones are not the oldest.

One 700 year old tree is 30 inches high and 3 inches in diameter — It is growing under most adverse conditions. The core borer will leave no permanent hole in the bark — the tree's resin heals the wound.

Another, 100 years old, is several times as big. They add about an inch of tree rings each 100 years — on the average. The oldest tree is at 10,000 ft. elevation. The biggest at 11,200 ft. elevation. The most vigorous trees are much more resinous than the others. Something to think about.

HOW TO GET TO SCHULMAN GROVE

It's 110 miles to Big Pine. Turn east 1/2 mile north of Big Pine onto Westguard Pass Road. Twenty-three miles after leaving Highway 395 you come to Schulman Grove — elevation 1000 ft. It takes about 3 1/2 hrs. from China Lake to Schulman Grove.

Batchelder Spring is the only water source along the road. Fill canteens there.

Half way up the mountain at 9000 ft. elevation there is a magnificent view of over 100 miles of the Sierra Nevada. It's a steep grade, but passenger cars in good condition can make it easily to Schulman Grove. Beyond there the road is rough — sharp rocks chew up tires — take spares.

Recent Maturango Museum safari — 25 cars — all made it — five cars had flats from rocks above the Grove.

Area closes for winter soon, because of snows. The normal season is July, August and part of September. There is one Forest Service campground — dry camp — wonderful view of the Sierras.

SPORTS REVIEW

BY BILL BORGSTADT

FIRST MATCH ON LOCAL COURSE

The Eleventh Naval District Seniors Golf Tournament sponsored by the District Recreation Office was completed recently and the NOTS entry of Captain B. L. McCreery and Don Fraser, PNC, took several honors.

There were matches at four different courses throughout the Eleventh Naval District and the China Lake course was selected for the first. The next match was played at Long Beach and from there play shifted to the San Diego area, first at the Admiral Baker Recreation Area Course and then to the Coronado Municipal Course in Coronado, California.

Participants in addition to the NOTS team included those from San Diego, Long Beach, Fleet at Long Beach, Marine Corps Recruit Depot and Camp Pendleton.

NOTS TEAM UNDEFEATED

The NOTS team distinguished themselves early by winning the first match and then continued to dominate tournament play by winning each succeeding match.

FRASER TOURNEY SHOOTOUT

Captain McCreery and Chief Fraser won the overall meeting in medal play, as well as capturing the low gross and low net honors. Chief Fraser was the tournament's outstanding golfer and received the trophy for individual low gross.

CLUB CHAMPIONSHIP BEGINS SOON

Paul Someson, PGA, urges all local golf members to sign up for the club championship tournament as soon as possible. The tournament begins on September 12 and the deadline for entering is September 7. It will be a match play, seven flight, elimination tournament, in which you play against golfers of equal handicaps, all competing for trophies of equal size within each flight. See the Pro for particulars and to sign up.

ATTENTION GOLFERS

One final note to local golfers — please repair your ball marks and replace all divots. (This request paid for by golf pro Paul Someson.)

PHILLIES A SHOO-IN?

After a slow second half start the Phillies have zoomed into a commanding 7 1/2 game lead. It will take a streak by the Giants, Reds or Cards like the Cards of last year (19 of 20) to make it interesting. Again, the Cards are most likely to do it.

It looks like the Yankees are out. Baltimore and Chicago show no signs of folding and since the Yanks have completed play with both these clubs, they will have to depend on other teams to do their work for them, certainly not the class of previous Yankee Teams.

Scene and Heard

(AFPS Weekly Feature)

ARMY SPORTS WRITER PICKED PHILLIES

An Army sports writer for "The Ranger" at Ft. Lewis, Wash., writes under the pseudonym "Horsehide Harbinger" and this is a year that could prove the name a worthy choice. Horsehide had plenty on the ball, indeed, to be the only one among 252 Armed Forces sports editors to pick the team—Philadelphia—that looks like a winner in the National League.

Horsehide's vote came out in an Armed Forces Press Service poll conducted when the first harbingers of the baseball season—spring training notices—began to draw the nation's attention. His contemporaries in the Navy, Air Force, Marine Corps, Coast Guard and on other Army posts apparently ignored the fact that the Phillies were the hottest club in either league the second half of the 1963 season. Horsehide remembered, however, and he also saw that Philadelphia had eager young ballplayers and potentially the best pitching staff in either league. The club, he writes, is reminiscent of the Phillie Whiz Kids who eked out a pennant victory in 1950.

In the poll, the editors tapped the Dodgers to repeat in '64 and the Giants to finish a close second, but you had to run down the ladder to sixth place before you found the Phillies. On record as the Armed Forces' only "official" Phillie backer, Horsehide is now in the books as saying, "I told you so."

With the season now about three-fourths over, Philadelphia still has plenty of time to fall apart and let another club win, although there isn't enough time for that other club's winning margin to be overwhelming. If the Phillies do fold, Horsehide and those who unofficially picked the Phillie could still achieve a measure of glory for coming so close.

Actually, this could be a banner year for the military limbers who took part in the baseball poll. In the National League, if third-place Cincinnati should sneak in, there are six Armed Forces sports editors who could say "I told you so." If Pittsburgh—another season-long first-divisioner, should turn torrid and win it—there's only one among 252 who can proud his chest. Of course the team with the best chance to wreck the Phillie wagon is San Francisco, but the Giants numbered 63 backers in the services. How must the 147 people who voted the Dodgers first in the poll feel these days?

PICKED YANKEES

In the American League, 202 service sports editors made the Yankees a runaway choice. But, lo and behold, Baltimore and Chicago have occupied the top spots most of the season. The Yankees, being the Yankees, are far from out of it, but the chances of their losing out are frightening or excellent, depending on which side of the pin stripes you're on.

And if either the White Sox or the Orioles become the American League champs, each club has a select group of six backers wearing the uniforms of their country.

Local Woman Bowler Sets New Valley Record

BY DICK ZINKE

Another league bowling record for the Valley was set for women last week when Della Montana separated the women from the boys. Della had a terrific night of bowling with her 616 series (scratch) with



BRIEF PAUSE — English ballerina Margaret Webb pauses before taking a dip in the pool. Lovely Miss Webb is a dancer in a Las Vegas night club.

games of 208, 215 and a 193. That's great bowling in any man's league.

In the Sagebrush League all the action was centered around Chub Johnson and Jack Brown last week as both had an exceptional good night of bowling. Chub rolled high game a very fine 244 and Jack came through with high series which totaled 654.

Much attention was also drawn by Russ Semore and we salute him for the feat of converting the 4 - 6-10 split. Team of the night was "We Five" rolling high game of 848 and Desert Motors with a 2492 series.

1963-1964 Bowling Recap Before we start another season of bowling it might be inter-

Special Services Activities Hours

Table listing activities and hours: Auto Hobby Shop, Bowling Alley No. 1, Bowling Alley No. 2, Ceramics Hobby Shop, Community Center, Electronics Hobby Shop, Equipment Issue Room, Golf Course, Gym & Weightroom, Woodworking Shop, Station Library, Station Theatre, Station Swim Pool, Tennis Courts, Weightlifting Room.

esting to recap last years bowling. The China Lake Bowling Association had a membership of 525 men out of which 15 members participated in the A.B.C. National Tournament held at Oakland, Calif.

They are as follows: Burt Andreason, Dave Boyd, George Burden, Coy Chaddick, Maurice Coleman, Ken Dalpiaz, Bob Dausch, John Dragovich, Bob Lockwood, Floyd Maxwell, Jack Newman, Jim Poore, Howard Rutledge, Karl Wright and Dick Zinke.

There were also 25 teams or 150 members that went to Bakersfield to enter the Calif. State Tournament.

The Indian Wells Valley Women's Bowling Assoc. had a membership of 355 this past year, eight of which live in Trona.

This year 13 teams of five women and 68 single and doubles were entered in the California State Tournament for women.

Junior Bowlers

For the junior bowlers, Youth Bowling Assoc., membership is divided into two groups. The Juniors age 13 to 18 enrolled 36 members forming eight boys teams and six girls teams and the Bantams, age 8 through 12, formed eight girls teams and eight boys teams with six members per team making a total membership of 147 youths.

1,027 Valley Bowlers

To sum up for all active organized league play, membership for the Valley registered 1,027 bowlers turning out weekly and a number of keggers belong to more than one team.

This is Bowling Week in southern California and time to warm up that pitching arm for the winter season. The alleys indicate there are still vacancies for winter league teams.

The success or failure of this column depends on your league secretary reporting league news to Dick Zinke by Friday evening for the following week's edition.

Moonlite Doubles Bowling Tourney Slated for Sept. 4, 5

A handicap Moonlight Doubles bowling tournament will be held on Friday and Saturday nights, Sept. 4 and 5 by the China Lake Bowling Association at the China Lake Bowl.

Entrants may sign up for either a 6 p.m. or 8 p.m. shift on date preferred. Entry fee is set at \$4.50 per couple.

The handicap will be based on 80 per cent of 200 on the entrant's high winter league average. If one was not established, a summer league average may be used based on 15 games or more.

Couples may sign up at the China Lake Bowl or call to reserve your preference as to date and time at Ext. 72006.

Tournament prize fund will depend upon the number of persons entered.

For those not familiar with Moonlight bowling, all the lights are turned off with exception of foul lights and on the pin deck. This is quite a challenge for the spot bowlers.

We had a good turnout for the last two tournaments, won't you join us in this one? We'll guarantee you'll find it quite a different tournament.

SPORTS QUIZ

- 1. In boxing divisions which is heavier, bantamweight or featherweight?
2. In tennis, what is the score when either side has won a point after deuce?
3. What sport is sometimes called barnyard golf?
4. For what team, in which league and where did Babe Ruth play his last major league game? Did he hit a homer?
5. Who was the only American League first baseman to hit .420 for a complete season?

Answers to Quiz

- 1. Featherweight. Bantamweight is not more than 118 lbs. and Featherweight is not more than 126 lbs.
2. Advantage, to the one making the point. The umpire calls "Advantage server," for a service point, and "Advantage striker," for the receiving side.
3. Horseshoes.
4. Babe Ruth played for the Boston Braves, National League, in Pittsburgh and hit three home runs.
5. George Sisler with the St. Louis Browns.

The Rocketeer

Official Weekly Publication of the U. S. Naval Ordnance Test Station China Lake, California. Capt. John I. Hardy, USN Station Commander. "J.I." Bibby Public Information Officer. Jack G. Broward Editorial Advisor. Richard Grunberg Editor. Budd Gatt Associate Editor. Frederick L. Richards Special Assignments. Bill Borgstadt, Sports.

DIVINE SERVICES

Christian 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 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. *COTS Hebrew Services (East Wing All Faith Chapel) Every first and third Friday, 8:15 p.m. *Irtarian Fellowship (Parish Hall) Fellowship Meeting—Sundays, 8 p.m.