



## RESERVE DECEMBER 31 FOR NEW YEAR'S PARTY

Don't forget to put a big circle around December 31 and join the crowd at the New Year's Eve party at the Activities Building. All employees are invited to come out and usher the old year out and the new one in.

The affair will be semi-formal which means evening dresses for the members of the fairer sex and business suits, tuxedos, tails or almost anything for the men. The celebration will get underway at 10 p.m. and music will be furnished until two in the morning by Jimmy Marshall and his orchestra.

The admission price will be five dollars a couple which includes set-ups, favors, noise makers, ice, etc.

Tickets are now on sale in the East and West Cafeterias and employees are urged to buy them early as only 250 tickets will be sold. Reservations for tables may be made by calling Harry Hamilton or Mrs. Branham at 2378. Persons wishing to reserve a table together are urged to buy their tickets together and make reservations at the same time.

For the safety and protection of those attending the dance, fireworks will not be permitted and monitors will be stationed throughout the building.

The following is quoted from a memorandum to staff written last year by Dr. H. J. E. Reid and the same regulations will be in effect this year: "Fire works are not permitted in the Activities Building and the Air Forces prohibits their use on Langley Field. If you have any in your possession you are requested to leave them outside the building. If you see any fireworks in the possession of anyone in the building please warn the person involved to take them outside, and if the warning is not heeded please advise Bruce Amole in order that he may take the necessary steps to secure their removal.

"I have instructed Mr. Amole

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Charles H. Zimmerman

## ZIMMERMAN TO SPEAK AT AIRCRAFT CONGRESS

Charles H. Zimmerman, Head of the Dynamic Stability Branch, will speak today at the first Convertible Congress in Philadelphia.

Zimmerman, who designed the XF5U-1 "flying pancake" several years ago, will deliver a paper entitled "Performance and Stability of a Convertible Aircraft" before the engineering group. The talk will be based mostly upon his work with Chance Vought's XF5U-1 between 1937 and 1948, but will include information learned from MACA wind tunnel tests with a one-third scale model. Zimmerman said he conceived the idea of the unconventional "flying pancake" in 1933 while making design studies at Langley aimed at improving small planes for private flyers. His previous tests of low-aspect-ratio airfoils influenced the pancake design.

A low-power prototype of the F5U, known as the V173 and built for the Navy by Chance Vought

(Continued on page 2)

## CHILDREN'S PARTY SET FOR DEC. 21

The Activities Association will sponsor their Third Annual Children's Christmas party on Wednesday, December 21 at the Activities Building. The affair will get underway at 6 p.m. and last until 8 p.m. The party will be given for the benefit of children of Laboratory employees and all youngsters who believe that there is a Santa Claus are invited. There will be no admission fee.

Ed Hoffman, Chairman of the Children's Committee for the Activities Association, pointed out that Santa Claus will be on hand to greet the children and he will present each one with a gift. Refreshments will also be served.

Don't forget to reserve December 21 for your children's evening at the Activities Building.

## RETIREMENT ACT AMENDMENT CITED

Congress has passed a law making certain changes in the Civil Service Retirement act which provides the same survivorship benefits for widowers of female employees that heretofore were available only to surviving widows. The same law also included a decreased percentage to be used in calculating the reduced annuity elected to be received by a retiring employee who designates his wife or her husband as survivor - annuitant.

The new law in detail is as follows: Public Law 310, approved September 30, 1949 amends Section 4(b) of the Civil Service Retirement Act, so that employees retiring under Section 1 (optional with 30 years of service); Section 2 (Age); or Section 6 (Retirement on account of disability) may, at the

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 Editor. . . . . Ruth Angel  
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# ZIMMERMAN

(Continued from page 1)

under an experimental contract, made numerous flights in the vicinity of Bridgeport, Conn., between 1942 and 1947. The XF5U-1, designed and built in a 500-mile-per-hour fighter plane capable of slowing almost to a standstill in mid-air, never was flown because of contract cancellation after the war. Because of its remarkably low landing speed, the propeller-driven "flying pancake" had been planned for carrier operation at sea.

The primary objective in developing a convertible aircraft, Zimmerman says, is to achieve cruising performance and economy approaching that of a conventional airplane while retaining the ability to land and take off as a helicopter. The paper presents some of the major considerations influencing the performance of a low-aspect-ratio convertible aircraft in hovering flight, including landing and take off, in the transition from hovering to high speed, and at high speed.

Zimmerman shows that because of their effect on longitudinal stability and control, rigid rotors are unsatisfactory in the transition range. The factors governing rotor design from the aerodynamic standpoint are discussed.

He concludes that for the type of convertible aircraft under consideration, reasonable efficiency in forward flight can be realized with rotors of sufficient diameter to support the weight in hovering flight. He also states that the cruising performance and economy of such a convertible can approach those of a conventional airplane.

Zimmerman will speak under the auspices of the Philadelphia chapter of the Institute of the Aeronautical Sciences and the American Helicopter Society. His paper is not an official report of the NACA.

Zimmerman joined the Langley Laboratory staff as a junior aeronautical engineer soon after graduating from Kansas University in 1929. He was head of the Spin Tunnel from 1934 to 1937 and he developed the first Free Flight Wind Tunnel here. He then spent eleven years with Chance Vought Aircraft Division of United Aircraft Corporation in charge of development of the F5U convertible aircraft design and returned to Langley in 1948 as assistant chief of the Stability Research Division.

## Life At The Laboratory

Keeping the. . . . .

Tommy Coleman household awake nights is a new daughter who arrived on Tuesday, November 22. The sponsors of the young lady are Dot, formerly of the Editorial Office, and Tommy Coleman, Gust Loads.

Dan Cupid scored. . . . .

a victory this week when Betty Lex Hayward, Flight Research, announced her engagement to Charlie Coleman of Newport News. No definite wedding plans have been announced.

Guess what?. . . . .

IRD has another baby. Bringing the Division's total to 41 for the year is six pound, seven ounce Nancy Adair Noble who arrived on Saturday, December 3. The proud father is Harold Noble.

Deserting the. . . . .

bachelor ranks is Robert McDougal, Gust Loads. He recently took his final vows with Mary Brown of Georgia.

Celebrating the. . . . .

arrival of a six pound, three ounce daughter on Sunday, December 4 is Tom Brady, Flight Operations.

Undergoing treatment. . . . .

at the Dixie Hospital is Spence Watkins, Flight Operations. Spence is finding his inactive life a bit dull and would like some company.

Wedding bells. . . . .

rang Thursday, December 1 when John L. Hudgins, West Machine Shop, took his final vows with Estelle Harris in Richmond.

Passing out cigars. . . . .

and candy is Clarence T. Brown, Jr., West Engineering. He became the father of a daughter on Thursday, December 1.

## Dr. Reid Thanks Laboratory Staff

Personally, and on behalf of the Community Chests of this area, I want to thank the Laboratory staff for their contributions to the Chests. Every dollar that you have given will be appreciated and used effectively by the various Chests and the many social service and welfare agencies serving this area.

While the amount contributed was only slightly higher than last year, it is gratifying to note that there were more sections of the Laboratory with a hundred percent participation and that the percentage participation of the entire Laboratory was higher than last year.

We employees of the Laboratory are also part of the community, and it is hoped that the interest in the work of the Chests and their member organizations will not cease with the monetary donation to the Chests. There are opportunities for rendering a service to the community by other means, and it is hoped that there will be members of the Laboratory staff who will take an active part in the work of the Chest and attend the annual meeting of the members next month. There is need for the help of capable members of the Laboratory staff on various committees of the Chest, and I want to point out this opportunity for additional service to the community.

I want to express my appreciation to Mr. Lee Dickinson, his capable area assistants, and the more than eighty solicitors who helped to make the Laboratory drive successful.

# BOWLING NEWS

## TENPIN LEAGUE

No major changes took place in the Tenpin League this week and LTS-I and Headpins still continue to lead their respective leagues. Cothren still leads in the individual categories with a 160 average, 242 game, and 626 set.

### MONDAY LEAGUE

Team	W	L	Avg.
LTS-I	23	10	.697
Equip. Eng.	19	14	.576
Flight	18	15	.545
W. Engineering	18	15	.545
Cherokees	17	16	.515
Structures	17	16	.515
Misselot	16	17	.485
Pinbusters	14	19	.424
Const. Eng.	12	21	.364
LTS-II	11	22	.333

### TUESDAY LEAGUE

Team	W	L	Avg.
Headpins	23	10	.697
Alleycats	22	11	.667
Repro's	21	12	.636
Miscellaneous	20	13	.606
Tyro's	17	16	.515
Elec. Eng.	16	17	.485
16 Feet	15	18	.455
7 X 10 Feet	14	19	.424
11" Tunnel	9	24	.273
Rockets	8	25	.242

### WEDNESDAY DUCKPIN LEAGUE

16-Foot #1 leads the Wednesday bowlers with 18 wins and 9 losses and West Model is following in a close second with 17 wins and 10 losses. Justice and Libby Wilson lead with high averages of 110.4 and 94.4, respectively.

#### STANDINGS

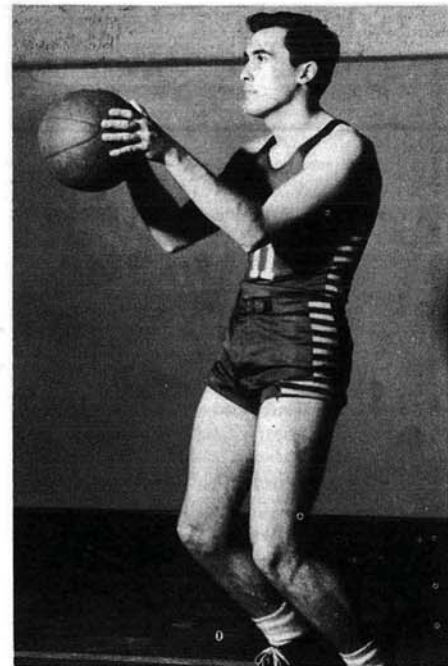
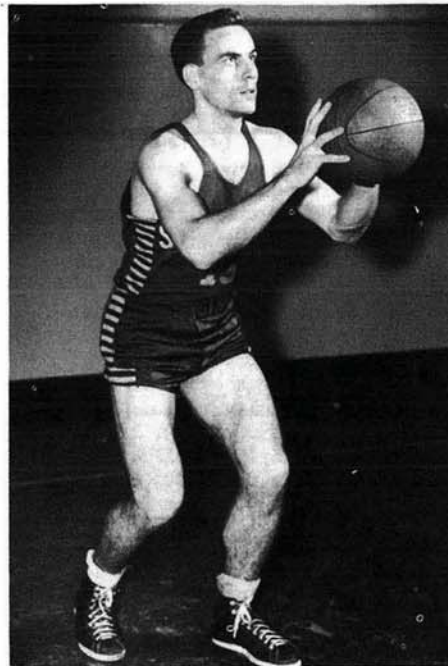
Team	W	L	Avg.
16-Foot #1	18	9	.667
West Model	17	10	.629
PARDners	18	12	.600
Tank	16	11	.593
GRIS	16	11	.593
W. Engineering	17	13	.567
Free Flight Triers	15	12	.555
16-Foot #2	14	13	.519
Flight Ragouts	13	14	.482
Sound Lab	14	16	.467
Stenographic	10	17	.370
Flight Deadpins	6	21	.222
Independents	6	21	.222

### IRD LEAGUE

The Unholy Rollers lead the IRD bowlers with a record of 11 wins and only 1 loss and Wrecks and Pinhookers are tied for second place.

#### STANDINGS

Team	W	L	Avg.
Unholy Rollers	11	1	.917
Wrecks	9	3	.750
Pinhookers	9	3	.750
Rebels	8	4	.666
Gremlins	7	5	.583
Gutter Rats	5	7	.417
Wheels	4	6	.333
Logodnics	4	6	.333
Aristocrats	2	10	.166
Bloodhounds	1	11	.083



Shown above are Ken Merten and Wally Luchuk, ace players and high point men for the Skyhawks last year. Both will be in the starting line up when the Hawks meet Fort Eustis next Monday night at the Activities Building.

WANTED: Ride over Christmas to the following places:

Scranton, N.J., Monahan, 4549.  
Pittsburgh or Wheeling, Wolfe, H-7121.  
Morganton, N.C., Poteat, 2249.  
Miami, Beutke, Langley Field 22123.  
N.Y. or Boston, Peacock, 4593.  
Nashville, Tenn., Owen, 4472.

WANTED: Passengers over Christmas to the following places:

Southern Iowa, Jenness, 4507.  
New York, Kainer, 4478.  
Newark, N.J., Schmidt, 4503.  
Atlanta, Becht, 4462.  
New York, Berman, 2245.  
Pittsburgh, Barber, 2336.  
Birmingham, Whitley, 2230.  
Roanoke or Wytheville, Clarke, 2394.

### MONDAY DUCKPIN LEAGUE

Free Flight Fliers still lead in the number one spot but PRD and Strike Sures are tied with 19 wins and 11 losses for second place, and Lucky Strikers are close behind with 18 wins and 12 losses.

#### STANDINGS

Team	W	L	Avg.
Free Flight Fliers	25	8	.758
PRD	19	11	.633
Strike Sures	19	11	.633
Lucky Strikers	18	12	.600
Demons	15	15	.500
Stock Section	15	15	.500
Gutter Balls	14	16	.467
Scotch 'n' Separs	14	16	.467
Mech. Maint. #1	13	17	.433
Rocketeers	13	17	.433
Gas Dynamics	10	17	.370
Gutter Rats	11	19	.367
Mech. Maint. #2	9	21	.300

## SKYHAWKS PLAY FOUR GAMES ON HOME COURT

Next Monday night at 8 o'clock the Skyhawks will play their first game on home grounds when they meet the Fort Eustis Quintet at the Activities Building. This game will open a series of home games for the Hawks with the team playing Parris Island, S. C. on Thursday, December 15, The Cons from Charlottesville on Saturday, December 17, and Camp Lee on Monday, December 19.

Admission to the games will be fifty cents per person, however, season tickets which are good for ten admissions may be purchased for \$3.50 from Nick Jevas, West Engineering, "Air Scoop" Office, or the members of the General Assembly of the Activities Association. Season tickets will also be on sale at the door.

Persons selling tickets are asked to return the money and unsold tickets to Nick Jevas, West Engineering, by Monday, December 12.

Last year the Skyhawks ended the season with 19 wins and 10 losses. During the season they scored a total of 1,506 points against their opponents' 1,319. Wally Luchuk led in the scoring department with a total of 371 points for an average of 14.3 and Ken Merten was close behind with 343 points for a 12.7 average.

LOST: Grey top coat. Bill Huston, 4418.

## ENGINEERS' CLUB MEETS DEC. 16

The joint meeting of the Engineers' Club of the Virginia Peninsula and the local chapter and Virginia section of the A.S.M.E. will be held on Friday, December 16 and will feature a talk by Dr. Lester M. Goldsmith, Chief Engineer of the Atlantic Refining Company. The meeting will start at 8 p.m. at the Apprentice Gymnasium in Newport News.

W. C. Roberts, Construction Engineering, is president of the Engineers' Club and F. L. Bledsoe is chairman of the local A.S.M.E. chapter.

The speaker will show films on the "Raising of the E.H. Blum", and will discuss the design of new tankers and propulsion plants being constructed for his company. The E. H. Blum is a tanker built prior to World War II with a turbo electric drive featuring high steam pressures and temperatures. During a storm at sea the ship broke amidship and one section returned to port and the other sank. The sunken section was raised and the two sections were successfully re-assembled at the Newport News Shipyard.

Dr. Goldsmith graduated from Drexel Institute of Technology, which later conferred on him the honorary degree of Dr. of Science in recognition of his many contributions to the engineering profession. One such contribution was the successful pioneering of the adaptation of Diesel-electric drive to tow-boats and medium size ocean-going vessels as far back as 1923. Subsequently he developed the high-pressure-high-temperature turbine electric steamship with the S.S.J.W. Van Dyke.

He is active in the A.I.E.E., A.S.M.E. and Society of Naval Architects and Marine Engineers and holds eleven U.S. patents and others in Canada and Great Britain.

## NEW YEAR'S EVE

(Continued from page 1)

to clear the building immediately if fireworks are exploded or if conditions in other respects are unsafe for personnel or property. I would regret having to take such action but my responsibilities for safety of persons in the building would make such action imperative."

NOTICE: All reserve officers interested in forming an Air Material Command Reserve Unit here call Webster, 4470.

## RETIREMENT

(Continued from page 1)

time of retirement elect to receive a reduced annuity, with an annuity payable after the death of the retiring employee to his or her surviving widow or widower equal to 50% of such life annuity, provided that the surviving widow or widower was designated as surviving annuitant by the employee at the time of his or her retirement.

A retiring employee making such an election shall have his or her life annuity reduced 5% on the first \$1500.00 or any part thereof, and any part of the annuity in excess of \$1500.00 shall be reduced by 10%. In addition the life annuity shall be further reduced by three-fourths of 1% for each full year, if any, that the designated wife or husband is under the age of 60 years at the date of the employee's retirement. In no case however will the total deduction exceed 25% of the life annuity.

The annuity of such widow or widower shall begin on the first day of the month in which the death of the employee occurs, or on the first day of the month following the widow's or widower's attainment of age 50, whichever is the later. The annuity and all rights thereto shall terminate upon his or her death or remarriage.

The provisions contained in this new rule are not retroactive.

## COMING EVENTS

Printed below is a calendar of events scheduled to take place in the Activities Building throughout the coming week.

- Dec. 9 - West Machine Party
- Dec. 10 - Engineering Division
- Dec. 11 - Iowa State Party
- Dec. 12 - Skyhawks vs. Fort Eustis Personnel Party
- Dec. 13 - 7 X 10 Party
- Dec. 14 - Male Chorus Cost Office
- Dec. 15 - Skyhawks vs. Parris Island, S.C.
- Dec. 16 - Loan's Party
- Dec. 17 - Tank Party
- Dec. 18 - Flight Children's Party  
W. Sheetmetal Children's Party

WANTED: Ride from Newport News to E.A. on 8 shift. Loewenthal, 2342.

WANTED: Passengers or riding combination from Phoebus to E.A. on 8 shift. Ezell, 4452.

## VOLLEY BALL

A new champion of the NACA Volley Ball League will be honored this year after Flight Pilots completed a successful season with 45 wins from 48 starts. This is the best record in the league history and the team is to be congratulated for its fine performances. 9-Inch Supersonic also rates special mention, winning all sets except those with the league leaders.

Wally Schulze, Chairman, wishes to thank all participating teams for their cooperation during the season.

### STANDINGS

Team	W	L	Avg.
Flight Pilots	45	3	.937
9-Inch	41	7	.854
24-Inch	31	17	.646
RMA	26	22	.542
E. Engineering	21	27	.437
PRD	19	29	.396
PARD	13	35	.271
Flight Research	12	36	.250
Structures	8	40	.167

## RECEIVE \$7,547 IN CHEST DRIVE

The annual Community Chest campaign at the Laboratory was completed this week, a total of \$7,547 being contributed by 2,721 employees for an average contribution of just under \$2.80. Eighty-eight per cent of the Laboratory contributed, an increase of eight per cent over 1948. A total of \$7,260 was received in 1948.

The percentage participation and total contributions of each division is as follows: Loads, 100, \$451.50; Structures, 100, \$398.75; Hydrodynamics, 100, \$194.25; Fiscal, 100, \$172.80; Flight, 98, \$370.35; Stability, 95, \$577.85; Independent units, 92, \$597.25; General Services, 91, \$262.67; PARD, 91, \$267.50; Compressibility, 90, \$592.75; Full Scale, 90, \$791; PRD, 90, \$270.50; Personnel, 89, \$95.70; Mechanical Services, 82, \$959.82; IRD, 80, \$480.26; Engineering Services, 80, \$637.69; Maintenance, 70, \$317.25; Procurement, 70, \$109.50.

Other groups reported to Chest headquarters as 100 per cent since the last "Air Scoop" include operations, aerothermodynamics and applied dynamics groups of Gas Dynamics, Woodworking Branch of Mechanical Services, Telephone Exchange, and Foundry.

The contributors designated their donations as follows: Elizabeth City County, \$6,347.09; Newport News-Warwick County, \$1,020.10; York, \$148.50; Norfolk, \$13; Gloucester, \$10; Portsmouth, \$7; Nansemond, \$2; Mathews, \$1.