A special report in this issue

APPROACH TO A CRISIS

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FOR TWO OR THREE years now there has been little if any news in this magazine concerning the approaching integration crisis in Georgia. The mass media, we imagine, have managed to keep you well informed about everything that has happened in this area. Since that May Monday in 1954 when the Supreme Court dropped its bomb on the South, our policy has been “wait and see and when it looks as if Tech is getting involved in the problem, start reporting.”

Tech has been directly involved in an incident or two since that time, and we have dutifully reported them to you. Now, as Lewis Carroll’s walrus once said, “The time has come to talk of many things.”

We are treating Tech’s approach to this coming crisis as a straight news story beginning on page 7 of this issue. Association President “Pop” Siegel reports on the action taken by the Board of Trustees of the Association on page 6.

We do not propose to take sides on the rights or wrongs of the issue itself. There are enough people stirring the pot already in and out of the South. But, we do believe that the alumni of Georgia Tech deserve to know the facts of the issue in order that you may decide for yourself if the decisions being made by the Tech administration are the best ones for maintaining Tech’s reputation as one of the very best technological institutions in the world. Actually, the administration will have little opportunity to make any decisions bearing directly on the integration crisis. The courts and higher governing bodies seem to be making all of them for our administration.

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Anyway, we thought that you would prefer this treated as news and that is the way it will be treated from beginning to end of what may be the toughest crisis in the history of Georgia Tech.

WE COULD have picked no better time to feature Roger Kaiser on a cover than in our February issue. The very evening that The Alumnus started rolling off the presses, Kaiser had his greatest evening. He hit 29 points against Kentucky. And his final field goal shot over the two best and biggest Wildcat defenders with two seconds on the clock won the game 62-60.

On top of that, Kaiser played the entire game handicapped by a fractured thumb which once threatened to keep him on the bench.

It was without a doubt the greatest one-man-show of competitive brilliance we have ever witnessed. The following Monday our summation of the game was given some credence when Athletic Director Bobby Dodd called Kaiser, “The finest competitive athlete we have had at Georgia Tech in any sport since I came as a backfield coach in 1931.”

A WE COULD have picked no better time to feature Roger Kaiser on a cover than in our October issue. Two professors were most mentioned by the class of 1935. They were Dr. D. M. Smith of the Mathematics School, and Dr. Count Gibson of Civil Engineering. When the article appeared, Count Gibson lay near death in a hospital in Boston. In December, we received the following letter from Mrs. Gibson telling of the effect of the article on the professor:

“Due to a very critical illness and operation, Count has been too ill to have the October Alumnus even read to him. Just yesterday I did read to him the article by Professor Medalia. He was greatly moved by the very complimentary reference to him in this article.

“He is too ill to personally write his thanks, but he has asked me to say the reference to him did more for his morale than anything the doctors could do. Loving Tech as he does and especially those boys who sat under his teaching, it filled his heart with a warm glow to feel his boys had not forgotten him.”

On January 21, 1961, Dr. Count Gibson died in that same hospital. But, at least he died knowing that he had done something worthwhile on this earth, and that his boys had not forgotten him. Most of us aren’t granted that much.

A ONE OF THE TASKS we look forward to each year is the “College Days” at various high schools throughout the South. For the past two years we have drawn (fought for might be a better term) the pleasant trip to South Florida. Here the high schools are large and run very much like universities, and the students are sharp
and eager to learn, and they swamp you with their enthusiasm for a college education.

The big colleges are all represented in this area, because the high schools have an extremely high reputation. This past winter when we were at North Miami High School, a newspaper reporter from Miami did a special feature on College Night at this high school, one of the largest in the entire South. In one paragraph was this rather strong statement that must have irritated quite a few people: “MIT, Georgia Tech and the Ivy League schools are still the top favorites, but most students are willing to settle for schools of lesser academic level...”

It looks like Tech has arrived in South Florida to be quoted in such company.

* * *

A DURING all of our trips to Florida, we stop at Victory Groves near Cocoa Beach to pick up a stock of fruit and ship some to our relatives. We have formed this habit because of the superior taste of the fruit from these particular groves. This year, we ordered a large basket of fruit for a sister who lives in the frozen North. After a few weeks we received notification that the basket had been returned to Victory because of insufficient address. The letter was signed by the president of the groves, C. F. Myers. We wrote Mr. Myers back and stated that other express shipments had been delivered to the same address without any trouble and asked him if he would mind looking into the matter, and we would be happy to pay for the second shipment of fruit. We wrote the letter on our office stationery.

Three days later we received notice that the fruit had been reshipped by another method and there would be no additional charge to us. On the bottom of the shipping order was a note: “Our president, Mr. C. F. Myers, is an alumnus of the Class of 1940 of Georgia Tech.”

You just never know where you will run into a Tech alumnus.

* * *

A SPEAKING of good high schools we have just heard from Fuller E. Callaway, Jr., ’26. In his note, Mr. Callaway pointed out that four LaGrange High graduates now attending Tech happen to be members of the same Young Men’s Bible Class at the First Baptist Church in LaGrange. For the last quarter their average grades were John Lowe, 3.9; Joe Floyd, 3.8; Richard Williams, 3.6; and James Alvin Davis, 3.6. We can’t think of a better tribute to LaGrange High School than this set of averages.

Prof. Wallace Jr.
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Officers of the Georgia Tech National Alumni Association

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THE COVER

A relatively small photograph plus a billboard on this issue's contents occupy the cover. The photograph is of Dr. Larry Rubin, who is profiled for you on page 10-12 of this issue. The advance warning on the articles contained in this issue are, we hope, self-explanatory.

Cover photo—Bob Wallace

IN THE FEBRUARY ISSUE, this space was devoted to furnishing you background information on Georgia Tech in order that you, in turn, could do a better job of selling Tech. Just as the presses began rolling on that issue, the first overt signs of an approaching crisis hit Tech.

During this crisis period, Tech needs your help more than at any time in its history. Your support, your understanding, and your influence with others are all vital in maintaining Tech’s reputation and faculty during this time of stress.

On pages 6-9 of this issue, the Alumnus presents its own coverage of the events affecting Georgia Tech in the build-up to this crisis.

Your Board of Trustees has already acted to endorse President Harrison’s statements concerning student behavior in the difficult days ahead. During our January 20 meeting, the Trustees approved the following statement concerning the president’s actions:

“The Board of Trustees of the Georgia Tech National Alumni Association fully supports the ‘no open demonstrations’ statement made by Georgia Tech President Edwin Harrison on Tuesday, January 17 to the student body.

“One of the most important functions of the Georgia Tech National Alumni Association is to safeguard and to improve the national image and reputation of Georgia Tech and Georgia Tech graduates. Any action taken by the student body in the form of demonstrations would certainly materially affect the excellent national reputation of our institution. It could easily affect the value of a Georgia Tech diploma and the job opportunities of its graduates. It could also affect the funds that have been made available for research, faculty salary supplementation and other worthwhile projects by national companies, as well as the special grants that have been given to Tech by foundations. It could also affect the economy of our state by creating an atmosphere that would cause national industries to become unwilling to locate new plants in our area.

“Much is at stake, and we, the alumni of Georgia Tech, are depending on the proper conduct of each individual student to help insure the growth of the Institute and our state.”

I don’t believe this statement needs any amplification from me.
FOR SOME INEXPlicable REASON, the alumnus of the American university is generally pictured in the mass media as a jolly old dunce whose prime interest in his Alma Mater is based on (1) firing and hiring of football coaches, (2) returning to homecoming to see how much his classmates have aged while he has remained the same, (3) hiring and firing of basketball coaches, or (4) criticizing the president of the university for not running the place exactly as it was run when he was a student. The fact that in an era of the common man, most of the uncommon men are the millions of college graduates in this country, seems somehow to have gone unnoticed.

Last year (1958-59), America's colleges and universities received in financial support alone from alumni a record high of $185,927,137. Alumni giving now represents almost 25% of all voluntary support of our colleges and universities. Just as important is the fact that alumni giving triggers other giving. At Tech, the alumni gave $195,920 and worked on programs such as the Joint Tech-Georgia Development Fund which produced another $108,276 in special gifts. Does this sound as if the alumni are superficially interested in the Institute?

The alumni clubs get even worse treatment at times. The image here becomes one of a quarterback club. Yet, in our February issue, we reported on the highly successful seminar on “The Successes and Shortcomings of Chatham County Schools in Preparing for Technological Education,” an idea created and promoted by the Savannah Alumni Club. The meeting drew over 65 Chatham County educators to hear two top Tech administrators discuss this problem. A fine idea, well executed, the type of program which an alumni club can use to help build the correct image of responsible college alumni.

Seven years ago, the Greater Atlanta Club began a special scholarship fund to aid high-caliber needy students in this area to get a college education at Tech. The funds used for this program were raised through the sale of tickets for the T-night game. Since that date, 57 Greater Atlanta students, who probably would not have been able to come to Tech, began a college program because of it.

Other clubs (working at the disadvantage of no football games to sponsor) took up the idea. This year, the Augusta, Birmingham, Chattanooga, Savannah, South Texas, Southwest Georgia, and the Florida West Coast Clubs all have scholarship programs for boys in their areas.

The Greater Atlanta Club has also been quietly promoting a program to help the foreign students at Tech get acclimated in the Atlanta area. Other clubs sponsor special high school nights. Still others spend a great deal of their time helping Tech and higher education in many ways that never rate headlines or a paragraph in the local papers.

The “male animal” stereotype of the American college alumnus is as warped and unfair as is the Hollywood image of the modern newsman: a trenchcoated man, cigarette hanging from his lower lip, screaming “copy” between gulps from a paper cup full of bad booze.

Bob Wallace Jr.
Background: On January 9, 1961, two Negro students entered the University of Georgia for the winter quarter as a result of a ruling by a federal judge in Macon. It was the first case of integration in a Georgia public institution at any level. The following Wednesday night, January 11, following a Tech-Georgia basketball game, a riotous demonstration was held near the dormitory occupied by the Negro coed. Out of this demonstration came the expulsion of several Georgia students for leading the riots, the indictment of two students and a number of Ku Klux Klan members by the Grand Jury in Athens, a faculty petition from the University of Georgia, a resolution by the Georgia House censuring the faculty for its petition, a series of four bills by the General Assembly which effectively declared a local option basis for future integration attempts on Georgia’s public schools as well as set up a tuition-grant system for private schools, and news and editorials in almost every newspaper in the country and many abroad. At this writing, the two Negroes are still attending the University and peace has come to Athens. On January 17, President Harrison held his quarterly meeting with the student body at Georgia Tech at the old gym. Here is a transcription of the meeting attended by over 2,000 Tech students, a record number for such a meeting at Tech:

Harrison: You people seem to have been born into a time of crisis. There isn’t much that you as individuals are going to be able to do except learn to live with crises, because apparently we are going to have them for a good many years yet in this world.

You are now attending one of the great technological institutions in America, perhaps in the world. The future of this school will, in large measure, depend upon the activities and the actions of this group which is assembled here today and a few of the others who for one reason or another couldn’t come.

I want you to realize the significance of what I have just said. Tech is a unique institution in this part of the world. It is the only technological school in the Southeastern United States with a national reputation. As an educational
institution, it is probably one of the better known in the entire world. And any actions and activities which you could undertake if and when a crisis should arise on our campus will affect greatly the future of the institution. Now, that is all I have to say as an opening statement. If you care to ask questions go ahead. The sky is the limit on any subject that you wish.

**Student:** Would you ask for a show of hands of students here, today, who would openly resist forced integration?

**Harrison:** All right. Those who would openly resist integration, raise your hands: (Note: About 20-30 hands went up at this request.) Let's not debate issues. All right. Who has another question? Incidentally, I don't want questions from anyone except students.

**Student:** Would you explain what you mean by an “open demonstration” and what Tech’s policy would be in cases of “open demonstrations”?

**Harrison:** I shall be glad to do so. Recognizing that we were going to have the press here today, I wrote out a statement which I will read to you:

The Georgia Institute of Technology does not condone student involvement in riots, demonstrations, and disturbances likely to become riotous. Students who do involve themselves in such situations will be instantly dismissed, which means expelled from the institution. Moreover, students should understand that any action anywhere tending to instigate or add emphasis to a riot, demonstration, or disturbance, using pyrotechnics, making inflammatory statements, inciting to riot, obstructing law and order, or perpetrating actions of this general nature will be considered sufficient grounds for immediate dismissal. All students should also know that should a riot, demonstration, or disturbance occur, they are to go immediately to their place of residence and remain inside. Students in classes, the Library, etc., should remain where they are until instructed otherwise.

Now, gentlemen, those are harsh words and harsh requirements. I am sure that if a situation such as this would ever come about on our campus, the wisest thing to do is to follow the policy which I have suggested. This policy will be explained to you later through *The Technique*.

**Student:** *The Atlanta Constitution* reported that you suggested an increase in fees for Georgia Tech, would you comment on it?

**Harrison:** Yes, I will. Actually, I suggested a fee increase for the entire University System. That particular statement was taken from a report which I submitted to the Board of Regents. I was not speaking for Tech, I was speaking for the University System, all 19 units, white and colored. The necessity for doing it is simply this: The average salaries, the operating expenses for the schools in Georgia are such that it would take 10 million dollars additional operating funds to bring up our operating level to the average in this country. I don't believe that the State has revenues sufficient to grant any immediate increase of 10 million dollars to the University System. My suggestion, therefore, was that at least part of it be borne by those who are receiving the benefits of the University System. Our fees, for your information, are just about the average among tax-supported schools. As for technical schools, they are way below average. So we are not asking something that is excessive or unreasonable in increased fees. You will note that the article said it was to be, in my opinion, and I am not the Board of Regents, an across the board increase. That is, the junior colleges would ask for the same number of dollars increase in fees as Tech and the University or any other unit of the University System. I asked this because if it were based on a proportional or percentage increase, those schools that have very low tuitions would have a very low increase in fees and would tend to remain very low—those schools such as Tech (which already has the highest tuition in Georgia among State schools) would have the greatest increase and that I don't think is fair.

**Student:** If and when integration comes to Tech, what does the school plan to do to keep outsiders from entering the campus and causing trouble?

**Harrison:** Your first part of the question is “If and when” and I submit to you I know no more about “If and when” than you do—as of this moment there are no Negro applicants at Georgia Tech and whether there will be any or not I don't know. (Note: That very afternoon, four applications arrived at Tech from Negro high school students from Atlanta. In February, five more applications showed up.) We have been harassed by students who have picked up applications and then did not submit them. Now whether this is another one of the same type or whether it is an actual intent of coming to the institution, I couldn’t tell you. As for the second part of the question it will not be up to you, the faculty or the administration to keep them off, it would be left to police powers, in all likelihood from the City of Atlanta and State of Georgia.

**Student:** What action did the University of Georgia take against the football players who struck the Tech basketball players after the game in Athens?

**Harrison:** I have no idea, but I do know that the Tech basketball players walked away without causing any trouble.

**Student:** Would you outline some of the consequences that would happen to Tech if we were to go into the unfortunate situation that they had at the University?”

**Harrison:** First, I would say this—those of you who have friends around the country know that what has been recorded in cities such as New York, Boston, Philadelphia and Chicago has been most unfavorable to the University and the State. A part of it has been biased, and I suppose part of it has been true, but nevertheless the institution which existed for 175 years and is one of the great state universities has suffered. What would it mean to us here? It would mean in all likelihood that the opportunities for you in terms of employment would be very much worse.
The incomparable Ajax (Fred Ajax, director of public relations) directs the heavy traffic of questions from students to the president.

Approach to A Crisis—continued

than they were before the incident happened. You will find that this is one of the few states in the Union that actually has the capability to export technological and scientific talent. If this event were to transpire, we would have an awfully lot of talent that would go unexported. That is one of the problems. Second, the institution would be considered by the country as a whole, unfortunately, to be academically beneath the rest of the institutions in the country. These things would seriously hurt our research program and our graduate program, both of which must exist and thrive in order to build a sound technological school.

Student: What can we do to show our displeasure at being forced into an integrated situation?

Harrison: You can do anything you choose as long as you don't get violent. Don't incite others to get violent either. You have a right to feel as you choose and most Georgians feel apparently the way you feel. Now you can do whatever you choose and certainly neither I nor anyone else at Tech intends to change your views. But please, stay away from the violent aspect, that is what we ask of you.

Student: I do not believe that the activities of the press helped the situation at Athens. Is there any way they could be barred from the campus activities here?

Harrison: I feel that under the circumstances we would probably be doing ourselves more harm than good to bar the press. My experience is if you get in a fight with them you come out second best because they always have an edition coming out after you make your last statement.

Student: In connection with the Ford Foundation grant for graduate study, is Tech considering additional graduate programs?

Harrison: In the first place, the $690,000 that the Ford Foundation gave to Tech, was to be used only for existing graduate programs at the doctoral level. So that means as far as that grant was concerned there will be no additional programs. However, we are working on the possibility of offering a doctors degree in aeronautical engineering right now (Note: This degree has since been approved).

Student: How has the racial crisis affected Tech's ability to attract and retain a competent faculty?

Harrison: It has made a difference. We have had few people leave the institution; we have had a few people who were afraid to come. They expected the streets to be knee-deep in blood and all sorts of violent, terrible things to be going on. But I would say this—no permanent harm has yet been done and no significant change in the faculty has been brought about. The difference will come not this year but in the years '65, '66, '67, '68 when the number of young people graduating from high school will increase enormously. There will be 50% more high school graduates in '65 than there were in 1960, and because of that there will be a greater demand for teachers.

Student: You have announced a get tough policy. What is going to happen after the boom is lowered, and what are we doing to see that such things are headed off in the first place?

Harrison: Yes, we have discussed this. The Student Advisory Committee, a fine group of students to work with, met with me just a week ago and we talked about this in some detail. The development of a program of this kind cannot be done in a few minutes. It takes time. But we do expect a lot of student assistance, from practically all of you—assistance from the Interfraternity Council, assistance from the Dormitory Counselors, the officers at all levels within the student body. Snooks Saye (student body president) is working on these things. We hope the Student Council is going to give us careful consideration and help us out. All of these things will be done. We are giving it consideration but it takes a lot of time. And one of the big problems is the fact that once we get the group concerned, interested and trained, they leave. We have to start over again.

Student: Can the student expect a more realistic interpretation of the intoxicating beverage rule?

Harrison: In all likelihood no, if you mean by realistic more liberal. Which I think is what you mean.

Student: Do you think the crisis will alter the enrollment of non-Georgia residence next fall?

Harrison: It has not yet, and I doubt very much that it will. Of course, there is no way to predict in such things as this what the reaction is going to be. One of the strange things about this institution is that as well known as it is, practically everyone outside of the State of Georgia thinks it is a private institution. So perhaps that is one of the reasons we have not had significant troubles in this respect previously.

Student: How much do you think the fees are going up per quarter?

Harrison: I don't know how much the fees would go up.
I can tell you what it would take to get 10 million dollars for the University System. Please notice that I don't set the fees, the Board of Regents do—what I am talking about is an increase for all 19 units of the University System, not an increase for Tech to bear alone. Now it would take, I believe, $200 per student per year in order to bring it up to 10 million dollars. The Governor has already increased the operating fees two and a quarter million in his budget recommendation. So that would reduce it to $150 per year, per student. To think that we were going to get all of this at one time would drive us wild with ecstasy. And I know the Regents have no intention of giving us that much "gravy" so I don't know. My guess would be that it would be 25 to 40 dollars per year up to perhaps a 100 dollars a year at the most.

Student: What progress has been made toward an honor system at Tech and can we ever expect to have one?

Harrison: Let me take the last part first. You certainly can expect to have one and I thought a few months ago you might get to a portion of it this year. There are a number of students on the campus who are very interested in the development of an honor system and are working on it now. I hope that when they graduate there will be another group that will grab the ball, pick it up and go with it. Such a program must come with backing of an overwhelming majority of students or it is no good, and I am not going to cram it down your throats. I hope you will work for it yourselves.

Student: If and when integration comes to Tech what do you see as difficulties other than riotous actions?

Harrison: I think probably you will run into some social problems that perhaps are going to be based on individual interests more than anything else. Beyond that I couldn't think of anything else. Did you have anything particular in mind? I think in the case of most students who did not want to go to class with a Negro, we could find some other class in which to put them.

Student: Since Tech receives sums of money from other than tax sources, is there influence and pressure brought on us from the sources of these funds?

Harrison: The answer is "No." Now we do have to account for the money, but beyond that there is no pressure as to how it is spent unless, of course, in the original grant you are granted the money to perform a particular job then you must use the money for that job and not to buy the President an airplane, because I have looked into all of them and I haven't seen that airplane yet.

Student: In some Northern universities some of the student organizations have been forced to integrate or get off the campus. Do you think that is apt to happen here?

Harrison: I don't think anybody can force it on you. Not an organization within the campus. "No."

Student: If and when integration comes to Tech what would be the school policy in regard to housing?

Harrison: We have not established any policy. I don't know whether or not court procedures would demand that you house Negroes in the dormitories or not. I don't know whether or not that problem has been solved. At some institutions, I won't mention the name of one, but it is one I am familiar with as far as their problems are concerned, they have been able to avoid this problem by asking that Negroes live off campus.

Student: Would it be possible for students with an "A" in a subject going into what would be a final exam to be exempt from the final exam?

Harrison: I have endorsed that and suggested it several times to the appropriate people on the campus. They have not accepted my suggestion.

Student: You said that the Student Council was going to give aid in this crisis. Will they act as a riot squad?

Harrison: Actually they are going to give aid only in the event of disturbances due to the crisis. They are not establishing a riot squad either to incite or defend riots. At least, I hope not. I think that members of the Student Council, other student leaders, some of those people I mentioned a moment ago, certainly should use what persuasion they can to get any of you who might be in the process of becoming involved out of the way before someone picks up your ID card and takes it away from you and looks you straight in the eye and tells you "You are no longer a student at Tech." Because that is how swift the action is going to be.

Student: Is there anything being done to get a student activities building here?

Harrison: Yes sir. We are shaking down the students to get money. I am tickled to death you brought that up. I have told Snooks, I have told various students with whom I have talked to about this thing, please, gentlemen, I need some information on what this building will house and how big it will be. Now I have a report that tells all about how many people are necessary to run the program, but I still don't know how big the building is to be. When I find out how big it is I personally will go to work trying to raise the money to build the building, but until I know how much money to ask for I am stymied. And Mr. Guthridge (Joe Guthridge, director of development) over here will help me raise the money. We vote that our No. 1 project. All we have to do is know what we are asking for. When we get that, we are going to work for you.

Student: Would Georgia Tech require a court order before integrating?

Harrison: To tell the truth, I don't know. It depends on whether or not the applicant were qualified, not qualified, etc. I just don't know. And, besides, that probably would be determined by someone else other than the institution ultimately. Whatever other additional laws may be involved, I am not a lawyer.
FACE OF A POET

A young English teacher begins to make a name for himself and for Georgia Tech in the world of American literature

To many people, the campus of a major technological institution may seem to be one of the least likely places on earth to find one of America's outstanding young poets. But to Dr. Larry Rubin, Tech English teacher and award-winning poet, there is nothing incongruous about the fact that creative talent in the area of the arts should flourish in an atmosphere, primarily technical.

"If you want to write or paint, you can write or paint anywhere. I don't subscribe to the theory that there is a particular atmosphere necessary for creating," says the tall (6' 2"), slender assistant professor whose credits now include 130 poems in publications ranging from The New York Times to The London Magazine and from The Saturday Review to Prairie Schooner.

On the night of January 19, the soft-spoken poet, who looks and moves like a basketball player, stood in the limelight among his colleagues at the annual banquet of the Poetry Society of America where he received the Reynolds Award for the best lyrical poem of 1960. The award was presented at the Astor Hotel by Mr. Cecil Hemley, president of Farrar, Strauss, Cudahy Publishing Company, who was substituting for Robert Frost. Bad weather and the call to the inauguration of President Kennedy had kept the dean of American poets from being present in New York that evening.

"It was the biggest event of my life," says Rubin, "rivaled only by my first acceptance slip from a publisher back in 1956, a year after I joined the Tech faculty as a full-time member of the English department."

All of Rubin's published poems and short stories have been written since he moved to Tech from Emory University where he received his B.A., M.A., and Ph.D.

"I started out at Emory in journalism," he recalls. "In fact I received my M.A. in that area in the next to the last class before they closed the journalism school. But, my interest in the humanities took over and I went on for my Ph.D. I taught at Emory as a graduate assistant and that started me thinking about teaching as a career. Then in my final year there, I taught part-time at Tech and liked it so much that when Dr. Walker offered me a full-time position I took it."

"I did little writing while I was at Emory except in connection with my degree work. It wasn't until I came here to teach that I started thinking about becoming a writer in the professional sense of the word. Funny thing, most of my poetry has been roughed out in the stacks of the library out at Emory.

"On the average, I write a poem a week. The original draft is done in pencil and then I do the editing and polishing on a typewriter in my office. Of course, I discard about one out of every two poems I write. But I use many of them later for ideas to start on others."

He has also completed one book which is now in the hands of an agent. The book is about family life in Miami Beach where Rubin grew up as the only son of a local druggist.

Many of his poems also deal with members of his family. One of them, "The Druggist," appeared in The Saturday
FACE OF A POET - continued

Review for October 15, 1960. It was written soon after the death of his father and has attracted more critical acclaim than any of his published works. It is reprinted here with express permission of The Saturday Review:

THE DRUGGIST
He came to me last night, as if there had never been a box. Routine, no tales of Hell
To tell, he worked on an old prescription, and I watched, as I used to when I was a boy, and stifled my eyes, and from the corner of his eye he saw me and asked why. But all that dirt, I said, how did you get up past all that dirt? I can pull pegs out with my teeth, he said, and went on working.
Later, just before the third cock, he handed me the jar. Son, he said, I want you to deliver this before you go. Is that all, I said, mustn't I avenge your death so you can rest? Just deliver that medicine he said, and it was dawn and of course he was gone. And I knew that being sealed up like that had turned his wits, because I saw he had made the label out to me.

The two great influences on Rubin's style have been Emily Dickinson, the American romantic poet of the mid-19th Century, and Thomas Wolfe, the American novelist of the early 20th Century. Dickinson was his model when he first began writing poetry, and he still considers her the best of the romantic poets. His doctorate thesis at Emory was written about recurrent symbols in Wolfe's work. It was called "Image and Theme in the Tetralogy of Thomas Wolfe," a title he apologizes for as "too academic sounding."

The poem "Instructions for Dying," which won him the Reynolds Award also dealt with a subject recurrent in the works of both Dickinson and Wolfe. However, many of his poems and other writings are in a less serious vein, but, as he says, "People expect poets to be serious at times."
Rubin is now at work on his second book manuscript, a novel built around life on a Southern university campus.

Rubin enjoys teaching and plans to make it his career. His students at Tech look upon him with respect because of the national recognition he has received over the five years he has been on the campus. But, like all Tech students they judge him more on his ability as a teacher than as a poet.

One student sums up the feeling of his classes in this manner: "Dr. Rubin is a serious, well-prepared teacher, a bit on the shy side. He is always pushing his students to search deeply into writing to find out what the writer is really trying to say. He is slow to criticize any writer and never criticizes arbitrarily. Of all the teachers I have had at Tech, he is the one most conscious of the beauty of words."

I've seen him get involved in a passage and spend an entire hour on it when in my opinion it deserves at the most fifteen minutes.

"There is little feedback between the students and the teacher in Dr. Rubin's classes, due partly to his shyness and partly to his knack for stating the complete case of a work—in other words letting the student see every possible side of a short story or poem or a play before he opens the floor for discussion. For the serious student, he is an excellent, methodical, and sometimes inspiring teacher. For the student who is in the course simply because he must pass it for graduation, I imagine he may seem a bit dull."

Rubin, himself, says the same thing from a different viewpoint: "The practical nature of the technical fields present a temporary barrier to the average student's whole-hearted acceptance of the humanities. But this same practicality eventually forces the student to realize the value of communication and art to his survival and advancement in his profession and to his enjoyment of life. When this happens the Tech student does exceptionally well in the humanities. As a teacher in the humanities, I believe that it is my job to see that it happens to the highest possible number of students here at Georgia Tech."

Poet Rubin: "If you want to write, you can write anywhere. I don't subscribe to the theory that there is a particular creative atmosphere."
IS GEORGIA’S ECONOMY GROWING?

Only seven counties divided more than 50% of the manufacturing employment gained in the entire state of Georgia between 1947 and 1958—leaving 152 counties to share less than half the total.

A total of 68 counties actually lost manufacturing employment during the same 11-year period. And, 20 more gained less than 100 new manufacturing jobs, with their increases ranging from less than 1 to less than 9 per year.

These startling figures are only a few of many disconcerting facts revealed by an intensive analysis of industrial development in Georgia from 1947 to 1958. (The full report, expected to be off the press in March, will be available to all interested persons.)

Loss Since 1954

During the first seven years of the study period, Georgia led all states in the South except Texas in net manufacturing employment gains. North Carolina followed close behind, with Florida next.

Since 1954, however, Georgia has dropped sharply. The average net increase in the number of jobs added each year from 1954 to 1958 dropped to only 3,100, after averaging 7,600 during the period from 1947 to 1954. From second (behind Texas) Georgia dropped to sixth out of the 10 states studied in net employment gain. In terms of rate of gain, we dropped from 2.75% per year from ’47 to ’54 to only 1% during the latter period.

Worse Since 1958

What has happened since 1958? Preliminary figures indicate that 1959 was a worse year than 1958. And in 1960 a still further drop occurred.

The gains shown by preliminary 1960 figures indicate that some counties which had a small net loss in manufacturing employment from 1947 through 1958 wound up with a net gain for the 13-year period through 1960. An example is Richmond County (Augusta), which lost 43 manufacturing jobs during the earlier period but had an over-all gain of 769 as a result of securing several plants which went into production during 1959 and 1960.

The tentative 1960 figures still show 51 counties with a net loss since 1947, with 25 of those declining during the period 1947-58 gaining enough since 1958 to have an over-all increase. Of these 25, however, 18 had a very small total gain—from less than 1 per year to less than 10 per year. Only seven recovered sufficiently to have a net gain of as many as 11 or more new jobs per year.

Warning signals appeared also in a number of counties which showed a total gain, although the lack of comparability of the preliminary ’60 figures leaves some questions to be answered. However, several counties which gained during the early years of the study period lost during the

(Continued on Page 14)
last two to five years. Although they still show an over-all gain, their recent declines are a warning that they must reverse their present losing trend to avoid finding themselves in economic difficulties in the years ahead.

Florida Spurts

Florida and North Carolina spurted ahead during the latter part of the study period, while our rate of gain dropped sharply. Florida’s manufacturing employment gain was four times Georgia’s during the 1954-58 period, while North Carolina’s was more than double. In percentage gains, Florida increased from an already high 6.5% per year increase to 8.5%, while North Carolina’s rate of gain dropped slightly from 2% to 1.75%. As a result, North Carolina’s net job increase per year dropped slightly, from a little over 7,600 to about 7,200. North Carolina’s total of new jobs gained far exceeded ours not only because of her faster rate of gain but also because the Tar Heel state had a larger base to build on.

Few Electronics Plants

Georgia’s failure to attract a major electronics plant during a period when her competitors did already well in this field is one of several puzzling findings. As pointed out in the special report on electronics potentials in Georgia published by IDB in 1959, every state in the area except Georgia has at least one plant in the 1,000 employee and over category. North Carolina has six in the top category, Florida has four, Tennessee has three, and Alabama and South Carolina each has one. In addition, North Carolina has eight plants in the 250-1,000 category, while Florida and South Carolina each has three. Georgia has one plant in the 100-250 employee category, while Florida has 16, North Carolina has six and Tennessee and Alabama each has one.

The lack of electronics manufacturers is symptomatic of a major need confronting the State—further diversification. Only four industries—textiles, apparel, food and kindred products, and lumbering—accounted for almost two thirds of our manufacturing employment in 1958.

Double-Barreled Problem

A double-barreled problem therefore exists—a heavy geographic imbalance combined with a heavy concentration in only four industries. Neither a more rapid gain in income nor a stemming of the population exodus from the 92 counties which have been steadily losing citizens can be accomplished unless these two imbalances can be reduced.

The retention of our college and high school graduates, in particular, will depend on whether we can attract the “new-type” industries which can provide the dual attraction of higher incomes and challenging job opportunities.

Plastics and other chemical plants, fabricated metals, machinery, electrical machinery and instruments are some of the types of industries which we need to secure. In all these categories we have too few employees when compared with either the U.S. as a whole or with the more prosperous states with better balanced economies.

Differences in Gains

A quick look at the gains experienced by Georgia, Florida and North Carolina reveals some interesting differences. Georgia’s four major areas of gain from 1954 to 1958 were (1) food and kindred products—25%; (2) apparel—15.2%; (3) paper and allied products—11.8%; and (4) stone, clay and glass products—10%. North Carolina’s greatest gain—21.9%—occurred in the electrical machinery field (which includes electronics). Apparel was second with 20%, with furniture and fixtures third (16.6%), and food and kindred products fourth with 9.8%.

Florida’s gains were more evenly distributed, with stone, clay and glass products showing the largest gain (15.2%), fabricated metal products second (12.5%), food and kindred products third (11.9%), chemicals and allied products fourth (10.8%), and electrical machinery fifth (7.8%).

In Georgia, fabricated metal products accounted for just 6.4% of the net gain from 1954-58, following printing and publishing, which increased 6.7%. Electrical machinery gained only 4.4% in Georgia, and chemicals went up just 1.9%. North Carolina also showed small gains in chemicals and fabricated metals—2.0% and 5.7% respectively.

Port Development

Perhaps no better illustration exists of the fact that we are really just “getting going” in many areas than the study’s findings in the field of port development. The misleading nature of percentage gains is also pointed out by figures on our port progress. In essence, we started so low just a few years ago that the substantial percentage gains we have made tell only a small fraction of the story.

Actually, Georgia has just really begun to get into the port business. Brunswick’s 168.8% gain during the study period indeed looks impressive. But the less than 255,000 tons actually involved is scarcely to be compared with New Orleans’ 21,800,000 gain—or Mobile’s gain of almost 12,000,000 tons, or Tampa’s increase of more than 8,000,000—or Jacksonville’s mere 9% increase, which totaled over 4,600,000 tons.

The fact remains that Savannah’s 58.5% gain during the 11 years was 9th among the 12 port cities—and topped only the three ports which actually had a net loss during the period. Our gains since 1958 indicate that we are indeed now beginning to move. But the momentum long since gained by our competitors will make it extremely difficult for us to catch up.

The explanation is quite simple: Our competitor states spent from 2 1/2 to 9 times as much as Georgia on their port development programs. In the last two or three years we have spent approximately as much as has been spent on
all previous expansions. However, we still are investing much less than our competitors.

**Critical Need**

Particularly disconcerting is an obvious fact which we all are reluctant to admit—that unless bold steps are taken, and taken quickly, it appears inevitable that a number of counties will have suffered such drastic losses that they can never hope to regain economic health.

Even a relatively populous county cannot afford a year-in, year-out drain of its manpower resources. And many of our very small counties have been losing steadily for 20 years and more.

**Small County Problems**

The difficulties confronting local leaders in their efforts to promote new payrolls in our smaller counties are dramatized in the statistics cited in the opening paragraphs. When only 7 counties absorb more than 50% of the State's manufacturing employment gain over an 11-year period one thing is quite clear: It is much easier to "sell" a larger city than a small one to most industrial prospects.

A larger and more diversified labor market, better transportation facilities, often a larger market for the products to be manufactured (particularly if they involve consumer goods), and the many cultural attractions our metropolitan areas offer persons accustomed to living in large cities are some of the powerful magnets which pull industrialists to our bigger cities. Industrial training facilities and better quality schools may also play a significant role.

**Greater Effort**

Greater effort obviously is necessary on the part of our smaller towns if they are to have any real hope of generating new industrial payrolls. Not all will succeed—not because they can't do the job if they want to badly enough, but because local citizens just won't get around to finding the time, taking the effort, and spending the money needed to do the job.

Ghost towns—and even ghost counties—are inevitable if the job is not done. Wishful thinking cannot, unfortunately, accomplish what needs to be done.

**Non-Industrial Payrolls**

The magic words "industrial development" should not obscure a fact of utmost importance to many of our fading communities and counties. Manufacturing plants are not necessarily the answer to every community's prayer.

IDB staff members have urged more than one local development group to de-emphasize manufacturing payrolls and to concentrate instead on their fine tourist potentials. We have not yet even begun to tap the vast riches to be gained from intelligent exploitation of our many fine natural and historical attractions.

Nor should agricultural potentials be slighted. Opportunities to add income from new crops, greater diversification, better marketing techniques, irrigation, and improved farm management certainly should not be overlooked. The concentration of increasing numbers of Georgians in our cities can be at least a partial blessing for our farmers, in that it may well open up new and more profitable markets for a number of crops.

**Other Findings**

Many findings of the study which cannot be noted here will be included in the report. Also, a set of procedures and goals will be outlined as specific guidelines for solving the problems found to exist and for meeting the needs revealed by the analysis.

**Simple Prescription**

The prescription for our several ills can be simply stated: (1) We need facts which can tell us precisely what industrial and other economic potentials exist for each section of the state; (2) we need to provide technical assistance to local development groups and other agencies which are working to bring new payrolls to Georgia; and (3) both state and local promotional programs must be multiplied many times to provide the nation with a positive picture of Georgia as a place to work and live and to let industrialists know precisely what resources we have to offer.

**No Magic Formula**

Unfortunately, no simple panacea—no magic formula—exists for the curing of our economic ills. Only increased effort, intelligent building of sound programs, long hours of effort and a devotion to the job in hand can produce the desired results.

Whether our young people will remain Georgians or must go elsewhere to make a living is one of the many important questions whose answer lies in the balance.

**Disturbing Findings**

The State's industrial development progress—or lack of it—has been pretty much overlooked during the recent flurry of stories about population changes. But it is worth noting that the loss of manufacturing jobs suffered by almost half the counties in the State is in many ways more alarming than the population exodus.

There is no question but that Georgia has been losing ground in the stiff competition for new payrolls. Unless vigorous steps are taken not only to greatly strengthen existing programs, but to initiate new programs designed to fill gaps which still exist, we can expect to lag even more in the years ahead.

The loss of our young people—the inevitable result of our failure to create enough attractive jobs—may in many cases be irreparable. Hopefully, it appears that increasing recognition is being given to the acute need which presently exists.
TWO FOR THE SHOW

The Scott Blackfriars and Drama Tech team up to produce a top play

Backstage before dress rehearsal, a Scott girl and a Tech boy set up sound effects.

The weariness of weeks of rehearsals starts to leave its mark at the dress rehearsal.

Photographed for Georgia Tech Alumnus by Bill Diehl, Jr.
Two top collegiate dramatic organizations — the Agnes Scott Blackfriars and Drama Tech — recently teamed up to produce Thornton Wilder’s hit play of the early forties, "The Skin of Our Teeth." The idea for the cooperative venture came from the Blackfriars’ director, Roberta Winter. Acceptance of the idea by Drama Tech — barely able to keep its financial head above water — was positive and instantaneous.

The entire production was directed by Tech’s Mary Nell Santecrose with technical direction by Scott’s Elvena Green. Even the audience and critical plaudits were split evenly between Tech’s D. A. Polychrone, Tech associate professor of architecture, who played Wilder’s version of everyman, George Antrobus (the part initially played on Broadway by Fredric March), and Scott senior Brock Hanna who moved beautifully through Tallulah Bankhead’s original role of Sabina, the bored and confused every girl.

The play did excellent business, playing two nights at Atlanta’s Community Playhouse and one night on the Scott campus. It did not play on the Tech campus because Drama Tech lost its long-time home last year when Crenshaw Field House died of old age. The fact that there is no suitable place for drama at Tech at the present has placed the heavy financial burden on Drama Tech which now must hire a hall to put on its productions. It has also forced the nationally-recognized dramatic group to abandon its theater-in-the-round concept that has brought it national attention.
A Great Deal of Sweat and Tension Before an Opening

As the pictures on these pages indicate, the warm glow of an opening night is preceded by the sweat and tension and hard work of getting a production ready for staging. "The Skin of Our Teeth" has a large cast (24 males and 11 females), fairly complicated costuming (a dinosaur and a mammoth among others) and relatively involved staging. All of the work on the play was done on a cooperative basis between the members of the two clubs. They get no money for performing and no financial aid from the institutions. They do it only because they want to perform and because they need something to take their minds away from the daily grind of school.

The different reaction of a female and a male to the rigors of makeup is amazing.

The true test of a good amateur theater is whether or not the members can stand up to the hours of getting ready for the show.
After the dress rehearsal (above), the entire cast attended the traditional rehearsal party.

Just before going on, an actor goes through the tension of remembering his lines (above), while onstage, the leads (Polychrone, left, and Hanna) smoothly act out their parts, calmly and deliberately.
A Woman They Call "Coach" Keeps Drama Tech Alive

Since 1949, the forceful personality, theatrical acumen, and plain stubbornness of the woman shown on these two pages have managed to keep Drama Tech growing and prospering despite adversities that would have long ago felled most theatrical producers. She is Mary Nell Santecrose, an accomplished and experienced actress and director whom the boys automatically call Coach. If Drama Tech survives the loss of its home and the additional cost of "hiring a hall" it will be because of the dedication of the Coach and its faculty advisor, Dr. Bert Drucker of Tech's School of Mathematics, another individual with a large share of determination.
SEEMINGLY EVERYWHERE, THE COACH SHOUTS FINAL INSTRUCTIONS TO THE CAST FROM THE BALCONY.
OPTIMISM BLOOMS IN THE SPRING

Better get a check and a check-up before the football season that's creeping up on us briskly... the check is for tickets that will be moving fast as soon as they open the box office... the check-up to see whether you need repairs before moving up to the firing line with the Yellow Jackets.

Finest home schedule in years has come up on the Grant Field stage with three bowl teams waiting in the wings, backed by Auburn and Georgia.

If you figure you'd had it last fall... losing four games by a total of five points... fasten your seat belts for another rough trip. Improvement of several playmates on the 1961 schedule will leave an improved Tech team right in the middle of a brawl that gives them no chance of taking it easy on a given week end. I mean, the Engineers could have another run of close games decided by a field goal or a PAT... and decided either way. After all in fashioning their 5-5-0 card, our side beat LSU by a thin four points, Rice by three, and Tulane and Tennessee by a TD apiece.

"The way the conference is balanced now," Bobby Dodd says, "any team that wins half its games will have to be a real fine football team. Any less than a good team can come up with 2-8-0 as easy as not. I look for four or five of our games to be decided by three points or less."

There it is in cold chaste type, but until the neighbors come up with something better, the 1961 Engineers figure to be a shade better than last year, and capable of generating more exciting offense backed by more experience.

It is not unreasonable to expect that the Yellow Jackets have used up their quota of snake eyes for the decade.

When Dodd and his revised coaching staff called them out for spring practice, the job was sharply etched. The shortest position is at end where three of the four regulars were graduated. Next most acute is to find kickers for punting, field goals, points after and kicking off. Finally, the need is acute for a hard hitting fullback. At all other positions the supply of capable troops is adequate, if not actually plentiful. The spring drills were scheduled to start March 27 and end with the T-Night game Friday, April 28.

Here's a quick run down on the hands in sight at each position: Willie McGaughey the only veteran at center was hurt most of last year and a bunch of Sophomores had to get the job done. This trip, Willie is back as a tri-captain and his young assistants are on hand: Bobby Caldwell, Raymond Holt and Ed Chancey. The guards should be better than ever with everybody ready for duty again. Rufus Guthrie has a chance of becoming another Ray Beck. Mike Nicholl and Harold Ericksen are above average.

At tackle Ed Nutting had a disappointing year, but if he plays up to his fine potential the tackle force will be excellent. Larry Stalling had a great year and so did Russ Foret. Bill Wilson also looks like a great prospect.

After losing Gerald Burch and Taz Anderson, captains, plus Butch Carter the end spot is almost bare. The only returnee with any experience is Bobby Solomon. The coaches are looking for help from Jim Powell, who was hurt last year; John Wright and Joe Chapman, rising juniors and Bill Elders, who has another year of eligibility.

Stan Gann had a good Sophomore year at quarterback and should be greatly improved in poise and savvy this trip. Behind Gann should be Billy Lotheridge, who had a fine Freshman season and showed he was an all around athlete. Ben Ferguson, coming Junior; Bobby McKenzie, who was injured all last year; and Johnny Sinclair, a Sophomore will be out there looking for work.

At halfback, the Engineers will have two of the best running backs in the conference: Chick Graning and Billy Williamson, elected captains along with McGaughey. Right now they are finished players and the coaches would like to find adequate replacements so as not to have to work them on defense (although both are good in the secondary). The first replacements probably will be Tom Winger and Jimmy Nail.

Hunting for speed and sudden starting at the fullback spot may send the coaches down to the B-team where Jon Martin and Tom Schafer may be ready to pop into the first group. Other available fullbacks with experience are Lee Reid, Larry Lafkowitz and Mike McNames.

Taking a long guess: the Freshmen most likely to help at ends are Ted Davis, Billy Martin and Jack Clark. Two tackle prospects are Lee Grannan and Billy Paschal, son of the fine halfback of that name. The only Freshman likely to crowd into the guard group is a chap with the impressive name of Dudley Blizzard. Lotheridge and Sinclair are Freshmen certain to be prominent in the quarterback picture. Doug Cooper looms as a halfback candidate and Ray Mendheim has credentials as a fullback.

With Burch and Coker gone as punters and Wells as a field goal and PAT man, the jobs may fall to Lotheridge and/or Jon Martin who have looked good so far. Lotheridge is a real good field goal and extra point man.

When Marvin Bass broke in as defensive coach last year then went back to University of South Carolina as head coach, Dodd took a characteristically original step. He shuffled his current staff to keep a congenial well-adjusted force in charge. Lewis Woodruff, who has coached the defensive backfield will handle the offensive backfield, a job he has always wanted. Charlie Tate who guided the offensive backs will take over the defense. "In coaching the defensive backs, Woodruff has become a shrewd student of offensive football" Dodd says, "and in teaching offense to the backs, Tate has had to meet every defensive set and learn which ones are most effective. Both men are delighted with the switch."

When Tonto Coleman retired from active coaching to devote his full time to intramural sports, Jim Carlen was moved from Freshman coach to Tonto's spot with the defensive ends. He and Dick Inman will team with Tate in the defensive program. Jack Griffin will handle the offense with Woodruff and John Robert Bell. Jess Berry and Jim Luck will have charge of the B-team. The new Freshman coach is Art Davis of LSU.

It appears that the Engineers will go along with the times and employ a pro type offense. With Gann and Lotheridge throwing and Graning and Williamson running, the Engineers probably will expand the use of the flare pass that helped them so often last year.

The only switch in the schedule is exchanging Kentucky for Southern California at Los Angeles. The game will
open the season on Friday night, September 22. The Jackets will leave Atlanta Tuesday and spend Wednesday and Thursday visiting studios and Disneyland, play the game Friday night and take off for home Saturday.

“There is no point hauling the boys that far just to play a game and turn around and come home,” Dodd says. “They deserve to see a few sights and enjoy a pleasant break in the routine of practice before buckling down to a real tough schedule.”

With a home program that is exacting: Rice, Duke, Auburn, Florida and Georgia and road showings at Southern Cal., LSU, Tulane, Tennessee and Alabama (Birmingham)-the Engineers will have to come up with a few breaks that they missed last year if they expect to pick up a 6-4-0 card and several more to earn a 7-3-0 . . . but it could happen. The 1960 team was potentially better than several recent bowl teams and this new one certainly looks a shade fancier all around.

THE 1961 SCHEDULES

Baseball

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THE 1961 SCHEDULES

Football

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<td>Oct. 14</td>
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<td>*Homecoming game.</td>
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<td>†Night game.</td>
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Atlanta 1, Georgia
The March 1961
Georgia Tech
A digest of information about Georgia Tech and its alumni

The Institute

Top scientists lecture on campus

THROUGH the newly-established Neely Visiting Professorship Fund set up through the Georgia Tech Foundation by Mr. and Mrs. Frank H. Neely, '04, two of America's top young scientists presented special lectures at Tech during the past two months.

The first of the two scientists was Dr. Frank D. Drake, internationally-known radio astronomer from the Green Bank (West Virginia) U. S. Observatory. Dr. Drake presented two talks: the first, a semi-popular lecture on "The Promise of Radio Astronomy" on January 19, and the second, a physics seminar on "The Nature of Bright Cosmic Radio Sources."

Dr. Drake, twenty-nine, is a young veteran in a new field. He was among the first half-dozen Americans to get a Ph.D. degree in radio astronomy—from Harvard in 1958. Born in Chicago, he had studied engineering physics at Cornell and broadened his knowledge of electronics while in the Navy. At the new radio observatory in West Virginia he has measured the atmospheres of planets and has directed Project "Ozma," which was designed to detect radio messages from other intelligent beings in space.

The second scientist to visit the campus under this extensive program was Dr. George H. Vineyard, well-known solid state physicist at the Brookhaven National Laboratory (New York). Dr. Vineyard also made two presentations: a semi-popular lecture on "Effects of Radiation on Solids," and a seminar on "Neutron Scattering from Liquids."

Dr. Vineyard, forty, did his undergraduate and graduate work at the Massachusetts Institute of Technology, receiving his Ph.D. in physics in 1943. After spending three years at the MIT Radiation Laboratory, Dr. Vineyard joined the faculty of the University of Missouri. He was named professor of physics there in 1952 and joined the staff of the Brookhaven National Laboratory in 1954. His research areas include the application of neutrons to solid state physics, radiation effects on solids, and structural imperfections in solids.

Both of the scientists spent a great deal of time with Tech researchers and teachers during their stays on the campus.

AEC to provide assistance for reactor

THE ATOMIC ENERGY COMMISSION, under its research reactor assistance program, has granted $34,700 to Georgia Tech for acquisition of equipment for use in a research reactor under construction on the Institute's campus in Atlanta.

The grant covers the purchase of fuel elements, flux converters, (for changing energy levels of neutrons) and an antimony-beryllium startup neutron source. The Commission also plans to lend without charge the approximately 4.1 kilograms of uranium-235 required for the fuel and flux converters, 8.7 tons of heavy water for use as moderator-coolant and a plutonium-beryllium neutron source for instrument calibration. Total value of this material is over $500,000.

The loan of the uranium-235 and plutonium without charge is contingent upon current Congressional review of the recent extension by the Commission to June 30, 1964, of the waiver of use charges under the research reactor and educational assistance programs.

Construction of the Georgia Tech Research Reactor was initiated this fall with operation scheduled for late 1962. The reactor will be heavy water moderated-and-cooled, and fueled with highly enriched plates of aluminum-uranium alloy. It is designed to produce a thermal neutron flux of more than $10^{13}$ neutrons per square centimeter per second at a power of one megawatt.

The reactor will be used in the course of sponsored research under the administration of the Engineering Experiment Station as well as by the academic departments for staff and graduate student experiments in the engineering, physical and life sciences. The Commission program under which the financial assistance to Georgia Tech is being given was established in 1954. Similar assistance has been given to North Carolina State College, Pennsylvania State University, University of Michigan, University of Virginia, Washington State University, Massachusetts Institute of Technology, Texas A&M, and University of Buffalo.

The Recks need a Ramblin' Reck

AFTER GOING THROUGH many years with only a mental image of a Ramblin' Reck, Tech's Student Council is searching for a full-size, working automobile to be Tech's official mascot. The Reck should express the spirit of Tech on wheels and should be a symbol which could be driven at football games and other suitable school functions. The boys need an ancient but mechanically sound car for this project. If any alumnus has such a vehicle and would like to donate it to the Georgia Tech student body, please contact Bob Wallace, editor, The Georgia Tech Alumnus, Atlanta 13, Georgia.

Westinghouse to establish E.E. chair

THE WESTINGHOUSE Educational Foundation has awarded Georgia Tech a special grant of $48,000 to establish a Westinghouse Professorship of Electrical Engineering on the campus for the period, 1961-63. The stipend for a top professor to fill the special chair will be $16,000 per year through this grant. The new $3,500,000 Electrical Engineering Building, scheduled for completion this summer, should help attract more outstanding professors and students to the campus.

M.E. School and faculty honored

THE SCHOOL of Mechanical Engineering has been awarded six National Defense Education Act Fellowships for study leading to the Ph.D. One of the requirements for eligibility is that preference will be given to applicants who are interested in teaching in institutions of higher education.

Three assistant professors in the School, Mr. A. Louis Holliman, Mr. Calvin C. Oliver, and Mr. Philip G. Sexton, have been awarded fellowships for support of their graduate studies. Mr. Holliman received a Ford Fellowship at the Case Institute of Technology. Both Mr. Oliver and Mr. Sexton have been awarded Faculty

TECH ALUMNUS
Tech biologist receives fellowship

MR. EVAN DWAiN PORTER, Research Assistant Professor, Bioengineering Branch of the Engineering Experiment Station, is the recipient of a one-year terminal Fellowship from the National Institute of Health. He will complete work toward a Ph.D. in biology in the field of protozoology which will involve the study of morphogenesis of paramecium.

Winter enrollment up 185

A TOTAL of 5,325 students have enrolled in the day school for the 1961 Winter Quarter, according to Registrar W. L. Carmichael. This figure compares with an enrollment of 5,140 for the same quarter last year. The Evening School has an enrollment of 1,325 students and the Southern Technical Institute 740.

Fraternity men tops in fund drive

TECH FRATERNITY MEN collected over $16,000 during the recent Empty Stocking Fund Drive. The drive was for the collection of money for underprivileged children.

Tech fraternities collected over 25 per cent of the total amount raised in the drive. Fraternity with the largest amount was Alpha Tau Omega, who turned in $2,019.67. This represented an average of $18.68 per man.

Fraternities were divided into three groups according to membership. High fraternity in each group received a trophy, and high individual man in each group got a trophy.

Phi Gamma Delta was the high fraternity in group two, while Delta Upsilon collected the most in group three.

IFC points were awarded to all fraternities with over $7 per man.

These were Delta Tau Delta, Alpha Tau Omega, Sigma Alpha Epsilon, Kappa Sigma, Phi Delta Theta, Beta Theta Pi, Kappa Alpha, Lambda Chi Alpha.

Pi Kappa Alpha, Phi Gamma Delta, Tau Kappa Epsilon, Phi Kappa Tau, Phi Sigma Kappa, Delta Upsilon, Pi Kappa Phi, and Theta Xi.

Tech tops at Harvard Business

FIFTEEN of the eighteen graduates of Georgia colleges and universities now attending Harvard Business School are Georgia Tech alumni. The only one of the country's top graduate schools is Emory University which has three graduates on the campus at Cambridge.

Interest in the Harvard Business School in this area has increased notably since J. Spencer Love, chairman of the board of Burlington Industries, created a series of fellowships in his name especially for young men from the states of Georgia, North Carolina, South Carolina, Tennessee, and Virginia. Tech men received three of the six Love fellowships last year.


Dean Potter visits Tech campus

One of America's most distinguished engineering educators, Dean Emeritus of Engineering Audrey A. Potter of Purdue University, visited the Georgia Tech campus, February 21-22-23.

Dean Potter is the third top scientist or engineer brought to the Georgia Tech campus through the Neely Visiting Professorship Fund.

Widely known in engineering societies and civic activities, Doctor Potter has been a consultant to numerous industrial organizations as well as to governmental agencies. An author of numerous engineering publications, he is recognized nationally as a pioneer in personnel work for engineering students and in humanizing engineering education.

Doctor Potter spoke to the newer members of the faculty and staff on February 21 on "Qualifications of the Elite in Teaching."

In addition to this meeting, Doctor Potter held various conferences with Tech administrative officials on Wednesday and Thursday.

ATLANTA, GEORGIA—The annual winter meeting of the Greater Atlanta Georgia Tech Club was held at the Hellenic Center on February 2. President James P. Poole, introduced guest speakers J. D. Walton, head of the ceramics branch of the Engineering Experiment Station who spoke on “New Materials and Space,” and Dr. Ken Picha, associate director of the School of Mechanical Engineering, who spoke on “Russian Education, Today.” During the business session the club members heard reports on finances, scholarship, and the foreign student program. And, Jani Himranjani, a student from India, gave a brief talk on the value of the club’s program to the foreign student.

BALTIMORE, MARYLAND—The biggest Tech alumni meeting in the history of the Baltimore area was held in the Maryland city on February 17. Main event on the evening’s program was a panel discussion on “The Georgia Tech Story: 1961” by Tech administration and alumni leaders. Panel members were President Edwin D. Harrison, Coach Bobby Dodd, and Foundation President William C. Wardlaw, Jr. Accompanying the Tech team of speakers were Joe W. Guthridge, assistant to the president and secretary of the Foundation; Roane Beard, executive secretary of the Association; and Tom Hall, associate secretary of the Association. Harold G. Purinton, of Stein Brothers and Boyce, was Baltimore chairman for the meeting.

DENVER, COLORADO — Alumni Secretary Roane Beard was the featured speaker at the February 7 meeting of the Denver Club. Joe P. Byrd, III presided at the meeting and appointed a committee composed of Sam Whitehill, Jr., chairman; Clem H. Johnson, vice chairman; Robert W. Moorehead, Jr.; and W. Jeff Powell, to plan future meetings.

LOS ANGELES, CALIFORNIA—Over 60 alumni and wives attended the February 10 meeting of the Southern California Georgia Tech Club to hear about Tech and the plans for the Tech-Southern California game this September. Bill Flegenheimer, the retiring president, presided over the business meeting at which the following new officers were elected: George E. Barnes, president; Dana H. Johnson, vice president; William T. Schleich, secretary; and Clyde A. Paisley, treasurer. Speakers for the evening were Robert E. Eskew, business manager of the Athletic Association; Buck Andel, Tech’s trainer; and Roane Beard.
Memphis, Tennessee—The Memphis Georgia Tech Club held its January 14 meeting on a chartered bus on the way to the Tech-Old Miss basketball game held at Oxford. Despite the fact that the Jackets lost a heartbreaker to the Rebels, the meeting was an overwhelming success. Future trips are being planned by this group. Charlie Wood is the club president.

Pittsburgh, Pennsylvania—Dean Jesse Mason, Athletic Business Manager Robert E. Eskew, and Offensive Coach Jack Griffin were the speakers at the Pittsburgh Club meeting on January 10. The Tech officials were in the city for the NCAA meetings and brought the 56 people (including one Tech applicant) up-to-date on the Institute. Officers of the club are Ben Davenport, president; Jim Thompson, vice president; and Al Johnson, secretary-treasurer.

San Francisco, California—Forty-seven Tech alumni from the Bay area turned out for a meeting on February 8 to hear Roane Beard's presentation of "Georgia Tech, Today." William E. Moore was chairman for the meeting and with William B. Roberts, he was elected to plan future meetings for the group.

Washington, D.C.—The panel of top Tech administrators and alumni leaders opened its Eastern swing with a big Georgia Tech rally in Washington on February 16. President Harris, Coach Dodd, and Foundation President Wardlaw presented "The Georgia Tech Story: 1961" to the record-breaking number of 200 alumni in attendance. Planning the meeting for the Washington Club was C. Gale Kiplinger.

News of the Alumini by Classes

Maxwell L. Rahner, ME, former Atlantan, died January 4 at his home in St. Petersburg, Florida. He was sales engineer for Carnegie (Illinois) Steel Company until his retirement in 1950. Mr. Rahner is survived by his widow and one son.

Horace Holleman, one of the prime movers in the formation of the Georgia Tech National Alumni Association, died in Atlanta on January 2, 1961. He was president of Horace Holleman, Inc., a mortgage loan brokerage concern. Mr. Holleman was secretary of the old Georgia Tech National Alumni Association. A member of AIA, he was very active in the Greater Atlanta Georgia Tech Club. He is survived by his widow, the former Leila Ponder, a sister and three brothers. His widow lives at 314 South Woodward Way, N.W., Atlanta, Georgia.

Harold O. Rogers died January 6 at his home, 69 Brighton Road, N.E., Atlanta. He was Southeastern sales manager for Party Glass Company until his retirement recently. His widow lives at the above address.

Colonel Carroll Tye, formerly of Atlanta, died January 25 in Los Angeles, California. He served in both World War I and II. He retired after World War II and has lived in Los Angeles since that time. He is survived by his widow.

John Monteith Flanigan, EE, retired recently from the Georgia Power Company. He had been with the company since 1927. Mr. Flanigan lives at 245 Third Avenue, S.E., Atlanta, Georgia.

James T. Whitner died October 16, 1960. No further information was available at this writing. Mr. Whitner's widow's address is Route 1, Box 56, Dunwoody, Georgia.

Emerson Holleman has been elected president of Horace Holleman, Inc., Atlanta mortgage loan brokers.

Robert H. Myddelton died February 7 in an Atlanta hospital. He had been with Texaco, Inc. for 40 years.

Robert P. "Bob" Bell, Arch, died at his home in Jackson, Mississippi, January 2 of a heart attack. He was with the Mississippi State Rating Bureau.

John Hardy McDonald is now Director of Engineering at Florida Concrete & Products Associations, Inc. in Winter Park, Florida. He was formerly Field Engineer with Penn-Dixie Cement Corporation in Atlanta. Mr. McDonald lives at 61 Tropical Drive, Ormond Beach, Florida.

Vernon L. Borum, ME, has been appointed assistant vice-president, City Mortgages, with the Metropolitan Life Insurance Company. His office is at One Madison Avenue, New York, New York.

Edward D. O'Brien has been elected to the Board of Lay Trustees of Iona College, New Rochelle, New York.

Herbert Lionel Nelson, engineer with the Redstone Arsenal in Huntsville, died January 12 in an Atlanta hospital. He is survived by a daughter and two sons.

Mobley Sheppard, ME, owner and president of the Sheppard Plate and Machine Works in Atlanta, died February 1 of a heart attack. He was a member of Kappa Sigma. His widow lives at 2177 Ponce de Leon Avenue, N.E., Atlanta, Georgia.

Jules Gray, Arch, has been presented the 1960 Producers Council Award for his outstanding contributions to the Atlanta chapter of the American Institute of Architects. His address is 515 West Paces Ferry Road, N.W., Atlanta, Georgia.

Joseph T. Holleman has been named vice president of Horace Holleman, Inc., Atlanta mortgage loan brokers.

William S. Terrell, COM., vice president of the Terrell Machine Company in Charlotte, North Carolina, claimed the championship in the 7th annual Sea Island Seniors Invitational Golf Tournament in February.

Chesley E. Robinson, EE, died January 6 in a Birmingham, Alabama hospital. He had been with the Tennessee Coal and Iron Company for 20 years and at the time of his death was supervisor in charge of automation and electro-mechanical development in the engineering department. His widow lives at 828 Comer Circle, Vestavia, Alabama. He is also survived by two sons and three daughters.

A. S. "Syd" Williams, vice president of the United Kingdom Area of Coca-Cola, recently celebrated his 25th anniversary with the corporation. Executives of the Coca-Cola Export Corporation in Europe, the Mediterranean and the Middle East gathered in London for the affair. Mr. Williams received a score of presentations, including a watch and 25 year service pin.

Dr. George P. Woolard has been elected vice president of the American Geophysical Union. He is professor of Geophysics at the University of Wisconsin, Madison, Wisconsin.

Thomas J. Biggs, Arch, has been named by the American Institute of Architects to serve on the jury for the first annual Reynolds Aluminum Prize for architectural students. Mr. Biggs lives in Jackson, Mississippi.

V. V. Lavroff was honored at a dinner meeting in January for 28 years of service at Georgia State College in Atlanta. He was presented the Alpha Kappa Psi Faculty Award Certificate. Mr. Lavroff is associate professor of mathematics and comptroller at Georgia State College.

Edward Eugene Ford, MD, died January 29. He was associated with the Marshall and Williams Corporation in Greenville, South Carolina.

Walter A. Guest, who lived at Route 2, Austell, Georgia, died December 31, 1960.

William J. Fielder, former managing editor of the Savannah Morning News, died January 12 of a heart attack while visiting in Atlanta. In 1954 he won the gold George Washington Honor Medal and a cash award from the Freedom Foundation. Colonel Carroll Tye, former managing editor of Valley Forge for an editorial "What Is This Thing Called Freedom?" In the same year he also received a Reid Fellowship to study reciprocal trade problems in South America. After making this tour, he returned to the Savannah Morning News where he remained until 1957. He had worked for the Atlanta papers and done free lance writing since 1957.

Carmine J. Grossi, ME, has been elected vice president of Combustion Engineering in New York City. He was formerly export sales manager.
37 Charles R. Simons, of Gainesville, Georgia, is one of five prominent Georgia business and professional men named as a special chairman of the Joint Tech-Georgia Development Fund for 1961. Simons, a past president of the National Alumni Association, is the new state chairman for the drive to secure funds from business and industry for the state's two leading institutions of higher learning. During the first five years of this fund, over $1,000,000 has been contributed to the fund. Last year's record-breaking contributions totaled $280,000.

40 Doyle P. Butler, IM, has been transferred by Southern Bell Telephone & Telegraph to Macon, Georgia where he will serve as plant engineer.

Howard Ector, IM, has been named Atlanta chairman for the 1961 Joint Tech-Georgia Development Fund. Ector, former secretary of the National Alumni Association and the Georgia Tech Foundation, is trust officer with the Trust Company of Georgia.

42 Cdr. John Winford Shuff, USN, IM, crashed at sea January 7 while attempting to make a landing on the carrier Independence in the Tyrrenian Sea in the North Mediterranean. He was commander of Sidewinders B-86 Attack Squadron composed of Skyhawk jets. Cdr. Shuff was to retire from the service next year. His widow and four children live at Virginia Beach, Virginia.

43 James O. Conley, IM, has recently been promoted to vice president of The Munford Do It Yourself Stores, Inc., Atlanta. He was for 10 years sales manager of the Southern territory of Western Auto Stores, and for the last year and a half has been sales manager of The Munford Do It Yourself Stores.

44 Mr. and Mrs. Kenneth M. Brooks, IM, announce the adoption of a son, Kenneth M. Brooks, Jr., on October 14, 1960. Kenneth was born June 6, 1960. They live on Claybrook Road, Dover, Massachusetts.

Engaged: William Bunkley Harrell, ChE, to Miss Helen Poppell. The wedding will take place April 15.

45 William C. Mann, arch, prominent Memphis, Tennessee, architect, died December 31 of cancer. He was a partner in the firm of Mann & Harrover. Mr. Mann and his firm participated in work on projects such as the Fine Arts Center, the Art Academy, Memphis Airport Terminal, schools and clinics in the Memphis area. Mr. Mann married last spring to the former Dodi Schas. She lives at Park Towers Apartments, 59 Somerville, Memphis, Tennessee.

Born to: Mr. and Mrs. Byron T. McClelland, IM, a son, Neil Alexander, January 11. Mr. Byron is a partner with the firm of Thomas F. McClelland, CPA. They live at 2253 University Avenue, New York 68, New York.

B. F. Smith, Jr., ChE, has been appointed supervisor of Economic Evaluations and Special Studies at Texaco's Port Arthur-Port Neches, Texas Research Laboratories. He lives at 3147 Allison, Groves, Texas.

49 Mike E. Everett, Jr., IM, died January 11 in an Atlanta hospital after an illness of several months.

Married: Martin B. Goodman, CE, to Miss Barbara Blumoff in November. Mr. Goodman is engaged in the home building business in Miami. They live at 800 NE 154th Street, Miami 62, Florida.

James C. Sheehan, EE, has been named Product Line Manager, Gas Masks, with the Mine Safety Company. His home address is 2401 Haymaker Road, Pitcairn, Pennsylvania.

50 Russell Courtenay Bythewood, EE, has been advanced from the office of councilor for the Georgia Engineering Society to that of second vice president. He is manager of Residential Sales Engineering Division with the Georgia Power Company in Atlanta.

Born to: Mr. and Mrs. Robert Denton Clarke, ME, a daughter, Elizabeth Anne, January 26. They live at 1785 Farmview Road, Maple Glen, Pennsylvania.

Born to: Mr. and Mrs. George N. Williams, AE, a daughter, Julia Catherine, September 12. George is a design engineer at Lockheed in Marietta, Ga.

Franklin H. Cloud, IM, presented a paper in February at the annual meeting of the Technical Association of the Pulp & Paper Industry. The paper was entitled "The Use of Work Measurement." Mr. Cloud is Chief Industrial Engineer with the Packaging Corporation of America in Evanston, Illinois. He lives at 5950 West 51st Street, Chicago 38, Illinois.

Robert J. Shaw, IM, has been appointed general agent for the Pan American Life Insurance Company. The Shaw Agency office is located at 1401 Peachtree, Atlanta, Georgia.

48 Engaged: Julian F. Fiske, Jr., IE, to Miss Jewelle DeLaughter. The wedding will take place April 15.

51 Hoyt L. McClure, Director of the Southern Technical Institute, Cham-

MARCH, 1961
NEWS BY CLASSES — continued

American Aviation’s Los Angeles Division, Flight Simulation Laboratory, has been elected chairman of the company’s Simulation Council.

Born to: Lt. and Mrs. Channing E. Jones, IM, a daughter, Angela, December 31. Lt. Jones is stationed at the Naval Supply Depot on Guam. His address is c/o U. S. Naval Supply Depot, Navy 926, FPO, San Francisco, California.

Married: James Arnold Jones, Jr., CE, to Mrs. Frances McCrane Lay, February 4. They live at 1612 Berkeley Lane, N.E., Atlanta, Georgia.

Eddie C. Oxford, TE, has joined Shell Oil Company at Columbia, South Carolina. He lives at 2713 Glenwood Road, Columbia.

Allan E. Hoover, ChE, is attending graduate school at Rice University in Houston, Texas.

Born to: Mr. and Mrs. Stuart E. Peace, IM, a son, Whitney Stuart, December 17. Mr. Peace is a sales representative for the Burroughs Corporation. They live at 6209 B Military Highway, Norfolk, Virginia.

Married: Gordon C. Palmer, IE, a son, Gary Keith, December 17. Mr. Palmer is a project design engineer with the Logan Company, Louisville, Kentucky. They live at 1818 Wickham Way, Anchorage, Kentucky.

Married: Loren L. Ruark, EE, to Miss Brenda Jane Payton, December 24. Mr. Ruark is with the U. S. Army at Fort McPherson.

Born to: Lt. and Mrs. Robert E. Thompson, USAF, Arch, a son, Brian Scott, December 14. Mrs. Thompson also graduated from Tech in 1957 with an architecture degree. Lt. Thompson is currently flying the supersonic F-102 with the 82nd Fighter Interceptor Squadron, Travis AFB, California.

Born to: Mr. and Mrs. Myrl W. Allender, Jr., ME, a daughter, Julie, December 8. They live at 372 Ash Street, Laurel Bay, South Carolina.

Engaged: Joseph Walter Cooper, III, IM, to Miss Margaret McCullough. The wedding will take place March 18. Mr. Cooper is with American Art Metals Company in Atlanta.

Born to: Mr. and Mrs. Jack D. Edwards, IM, a daughter, Mary Elizabeth, January 11. They live at Portland, Arkansas.

Born to: Mr. and Mrs. Robert Herman Green, ME, a son, Robert Barrett. Mr. Green has been promoted to vice president in charge of production with the Southern Machine Company. Their home address is 1433 Elm Street, Chattanooga 3, Tennessee.

Engaged: Lt. Samuel Marvin Griffin, Jr., USN, IM, to Miss Mary Ann Hill. The wedding will take place March 18. Lt. Griffin is stationed at the Naval Air Station, Norfolk, Virginia.

Engaged: Thomas D. Mahone, IM, to Miss Patricia Milner. The wedding will take place March 18. Mr. Cooper is with American Art Metals Company in Atlanta.

Born to: Mr. and Mrs. Donald S. Pirkle,
Space-age careers at Boeing

This year, engineering and science alumni will find more challenging and rewarding careers than ever at Boeing. Advanced missile and space-age programs are expanding, and the proportion of engineers and scientists to Boeing's total employment is growing steadily. Boeing programs include the Dyna-Soar boost-glide vehicle, Minuteman solid-propellant ICBM, Bomarc defense missile system, B-52G missile bomber, KC-135 jet tanker-transport, the Boeing 707, 720 and recently announced 727 jetliners, and lunar, orbital and interplanetary systems and advanced research projects. A few of the many immediate openings are listed below:

DEVELOPMENT PROGRAM SUPPORT
B.S. or higher in AE, CE or ME (with any amount of experience) to perform temperature analysis and conduct studies in gas dynamics, heat transfer, ablation and gas dynamics testing.

STRUCTURAL DYNAMICS
M.S. or Ph.D. in AE or Engineering Mechanics (with at least two years research and development experience in structural dynamics, including response and stability, dynamic analysis, dynamic analysis methods or servo characteristics) to investigate response characteristics of time-varying and non-linear systems and develop methods of analysis.

MICROWAVE SYSTEMS
M.S. in Electrical Engineering or Ph.D. in Physics. To accomplish basic research in fields of microwave components and transmission systems. Studies of materials and techniques to improve wave guide systems. Assignments include laboratory and analytical research.

WEAPON SYSTEMS ANALYSIS
B.S. in AE, EE, ME or Math (with experience in testing, design or development of missile systems or subsystems, including ground support equipment and ground operational equipment) to plan and establish procedures for evaluating the results of Minuteman ICBM weapon system testing, and assist in analyzing data evolved during test programs and prepare reports incorporating this information.

AERODYNAMICS
M.S. or Ph.D. in Aerodynamics. For assignments in development programs involving STOL technology, performance analysis, establishment of preliminary aerodynamic configuration, stability and control predictions, supersonic engine inlet design and testing, and internal aerodynamic investigation. These programs involve preliminary design on aircraft and missile projects.

GAS TURBINE ENGINE DESIGN
B.S. or M.S. in ME (with 5 to 10 years experience in layout and detailed design of complex mechanical assemblies involving lubrication, thermal stress, inertia stress and assembly tolerances) to perform layout and design work on gas turbine engines and their components.

PACKAGING ENGINEERING
B.S. in ME, CE or EE to design and develop industrial and military packaging for the protection of electronic equipment and missile and aircraft components. Assignments include analyzing, evaluating and testing methods, materials and techniques for the protection of fragile and intricate items.

FACILITIES EQUIPMENT ENGINEERING
Engineers with B.S. degrees in ME, ChemE or EE, with five years minimum experience, to provide services for equipment design, specification, selection and operational reliability. Equipment involved may be manufacturing process and test equipment (e.g., hydraulic functional test equipment) or electronic equipment (e.g., test equipment for airborne electronic systems).

CERAMICS
Ceramists with Ph.D. degree or equivalent professional background to conceive and conduct investigations of the factors influencing ductility and fracture.

BASE INSTALLATIONS
B.S. in EE or ME (with 10 years experience in architectural or engineering design, design checking or coordination, drawing delineation or equivalent activity) to review architectural and engineering drawings of guided missile base installations and comment on design, recommending revisions, preparing cost estimates, and engage in Air Force and other outside company contact work.

COMPUTER METHODS
B.S. in EE, ME or Math (with 0 to 6 years applicable experience) to perform new uses for and integrate new electronic digital computing equipment with existing equipment.

ANTENA SYSTEMS
M.S. in Electrical Engineering or Ph.D. in Physics. To accomplish basic research in fields of surface wave antennas or large array antennas for possible air-born application with use of the IBM 7090 Digital Computer, 231R Face Analog Computer and other antenna laboratory equipment. Projects include such items as antennas for omnidirectional radiation pattern coverage in both horizontal and vertical polarizations.

QUALITY CONTROL
B.S. or M.S. in Electrical Engineering, Mechanical Engineering, Physics, Chemistry or Metallurgy. Advanced training in Mathematics/Probability Science helpful. Establish requirements and analyze reliability performance data; correlate performance data and design specifications; design test programs based on statistical parameters; recommend changes to product design and determine the need for changes in manufacturing process.

PLASMA PHYSICS
Experimental and theoretical physicists with Ph.D. degree in physics for the staff of the Plasma Physics Laboratory, Boeing Scientific Research Laboratories, to conduct studies in the field of basic microwave plasma physics, transport properties of plasmas and quantum plasma physics.

ELECTRONICS AND GUIDANCE SYSTEM DESIGN
B.S. in EE or ME (with EE or mechanical design experience) to evaluate flight instrument requirements for the Dyna-Soar boost-glide vehicle program, perform avionics component and system engineering, prepare source control drawings or design procurement specifications, perform technical evaluation of vendor proposals, perform design and development monitoring, evaluation and qualification testing, and system avionics integration.

TEST ENGINEER
M.S. in Aeronautical, Electrical or Mechanical Engineering. For test programs covering aerodynamic, electrical, electronic, structural and mechanism projects. Assignments require planning, development monitoring and analysis of tests in laboratories and actual flights.

STRUCTURES & MECHANICAL DESIGN
B.S. in CE and ME for component and assembly design for transport airplanes in developmental and production phases. Must be capable of contributing creative engineering and original ideas to airplane applications. Requirements in landing gear, controls, air conditioning, hydrualics, and structural systems.

Advantages you'll enjoy at Boeing include up-to-the-minute facilities, unexcelled research equipment, insurance and retirement programs, and a company-paid graduate study program (M.A. and Ph.D.) designed to help you get ahead faster.

For further information write: Mr. John C. Sanders, Boeing Airplane Company, P. O. Box 3822 - UGT, Seattle 24, Washington.
IE, a daughter, Melany Ann, January 17. 
Lt. Pickle is serving with Detachment 4, 9th Weather Group at Dover AFB, Delaware. They live at 834 East Division Street in Dover.

Engaged: C. Lynn Strickland, Jr. to Miss Lynda Thompson. Lynn is vice president of a Birmingham, Alabama firm.

Paul Vickers, ME, has been elected vice president of the Allis-Chalmers Engineers Society which is made up of engineers on the company's graduate training program.

'59
Lt. Charles R. Bamford, USA, ME, recently completed the officer orientation course at Fort Belvoir, Virginia.

Lt. Anthony W. G. (Tony) Battaglia, ME, is on military leave of absence from Phillips Petroleum Company. He is stationed at the Army Ordnance School, Aberdeen Proving Ground, Maryland.

Preston B. Childs, Jr., EE, is associate engineer at Texas Instruments. He lives at 2413 Patrick Street, Irving, Texas.

Born to: Mr. and Mrs. C. Edward Ivey, IM, a son, Owen Michael, January 4. Mr. Ivey is a supervisor with the Atlantic Coast Line Railroad in Waycross, Georgia. They live at 807 Fern Street, Waycross, Georgia.

James B. Mathis, Jr., ME, EE, has completed the field engineering training program with Square D. He is now a field engineer in the Atlanta sales office.

Lt. David W. Ramsey, ME, USAF, received his wings in January and has been assigned to the 4510th Combat Crew Training Group (TAC), Luke AFB, Arizona for entry into advanced flying school fighter pilot training.

Born to: Mr. and Mrs. C. Edward Ivey, IM, a son, Owen Michael, January 4. Mr. Ivey is a supervisor with the Atlantic Coast Line Railroad in Waycross, Georgia. They live at 807 Fern Street, Waycross, Georgia.

'60
Born to: Mr. and Mrs. Loren E. Acevedo, EE, a daughter, Carmen Marie, December 29. Mr. Acevedo is a senior engineer with Radiation, Inc. They live at 313 Jasmine Lane, Melbourne, Florida.

Lt. Victor C. Amoroso, USA, IE, recently completed the missile officer orientation course at the Air Defense School, Fort Bliss, Texas.

Engaged: Jerome Allen Averbuch, IM, to Miss Peggy Ehrlich. The wedding date will be announced later. Mr. Averbuch is with Biltmore Homes, Inc. in Nashville, Tennessee.

Navy Ensign James W. Berger, AE, is stationed at Sault Field, Pensacola, Florida.


Naval Aviation Cadet John H. Cole, Jr., ME, is stationed at Sault Field, Pensacola, Florida.

Paul M. Daily, EE, is an assistant engineer in the materials and components engineering department at Sperry Gyroscope, Great Neck, New York.

Lt. John E. Dewees, USA, CE, to Miss Mary Jane Wise, January 14. Mr. Goode is with the U. S. Corps of Engineers in Charleston, South Carolina.

Stewart M. Huey, IM, is assistant engineer with the boiler division of Babcock & Wilcox Company in Barberton, Ohio. He lives at 579 Fifth Street Lane, Apartment D, Barberton.

Robert S. Runkle, CE, has completed six months active duty with the Army and is now working with an architect in Silver Spring, Maryland. He was married in March of 1960 to Miss Betsy Grater. They live at 8301 16th Street, Apartment 101, Silver Spring, Maryland.

Born to: Mr. and Mrs. Robert E. Salter, EE, a daughter, Teri Lynne, October 26. They live at 644 Linwood Avenue, N.E., Atlanta, Georgia.

Lt. Tommy R. Sommer, USA, CE, recently completed the officer orientation course at The Engineer School, Fort Belvoir, Virginia.

Frank R. Speer, IM, has been named "Man of the Year for 1961" by the Penn Mutual Life Insurance Company in recognition of his conscientious service to his policyholders and his underwriting achievements. He is with the James M. Thurman Agency at 986 West Peachtree Street, Atlanta, Georgia.

Engaged: Frederick W. Stover, Jr., CE, to Miss Patricia Henslee. The wedding will take place May 5. Mr. Stover is with the Norton Company in Worcester, Massachusetts.


'61
Born to: Mr. and Mrs. Charles Batterten, CE, a son, Bradford Allen, January 5. Their home address is 1856 Fisher Road, S.E., Atlanta, Georgia. Charles is with the Factory Insurance Association.

Engaged: Captain Joseph Anthony Gappa, Jr., USA, AE, to Miss Judith Mercer Walter. The wedding will take place in May. Captain Gappa is with the U. S. Army Combat Development Office at Fort Rucker, Alabama.

Buddy Leonard Jackson, IE, is participating in a three year manufacturing training program with General Electric. He is currently a process engineer in the X-Ray Department at St. Petersburg, Florida. He lives at 5166 100 Way North, St. Petersburg, Florida.

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Married: Samuel J. Warlick, TE, to Miss Carolyn Melvin, November 24. Mr. Warlick is with J. P. Stevens in Rockingham, North Carolina. They live at 307 East Green Street, Rockingham, North Carolina.
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