

## Changing of the Guard

**T**HE *Journal of Spacecraft and Rockets* is fortunate to have as its next Editor-in-Chief, Dr. Donald C. Fraser, Control and Flight Dynamics Division Leader of the Charles Stark Draper Laboratory.

Don served as Associate Editor in the halcyon days of increasing aerospace budgets and increasing *Journal* articles, but more importantly he continued to serve when we had to tighten our belts and find ways of keeping a quality publication before you in the face of declining budgets and increased costs. Later, he chaired the subcommittee which drafted the Publication Committee's recommendations for changes in the Constitution and By-Laws. His five years of direct service and his record of excellent decision-making on behalf of this *Journal* qualify him well to move to the top of the masthead.

Don will be supported in 1975 by the same group of

associate editors which served in 1974. Mr. Paul F. Holloway and Dr. Joseph V. Mullin have accepted new second-term appointments. We are fortunate to retain the services of these excellent and experienced editors.

For myself, it has been most rewarding to work with such an excellent staff of associate editors and professional editors in the New York office headed by Ruth Bryans and Anne Huth. I wish to thank them for their quality of decisions in selecting, editing, and processing the 1340 papers submitted these past four years. Locally, Eleanor Johnson administered the many daily details so efficiently that only she can describe the minute machinery of journal editorship. At home, my beloved wife, Ruth, and family tolerated the limitation and imposition upon their activities that this office demands during evenings and weekends. Thank you all!

## Building a Strong Foundation

**O**UR nation is locked in an international economic competition, and the individual technologist often wonders what contribution he can make in this largest of all games. Generally, he is not trained in economic and political subtleties, and even if he were, the need for specialization for excellence denies him the opportunity to pursue such a broadly based multidisciplinary career. Although the individual may find it beyond his scope to cope with such expansive activities, our AIAA is participating (see A/A, May 1974, pp. 16-19) by marshaling its combined technical and business talents at the federal decision-making level. This activity has been long overdue to balance the recognition achieved by other professional and labor organizations. Is there some contribution we can make individually?

As good citizens we know we must exercise our right (responsibility) to vote for the candidates of our choice, but each of us must have felt some futility of dilution when our vote is one of millions counted in State and National elections. To circumvent this frustration some of you have become active in political organizations to influence a better choice of candidates, some have even become candidates. These are laudible moves—politics needs technologists as well as lawyers and college professors to bring a balance of knowledge to government. But what if politics is not your game?

Most of us, whether from within our own homes, local community, or work have an opportunity to influence the caliber and motivation of young people who may enter the technical field. We are trained in this field and are the best qualified to advise. One does not need to become a politician, lawyer, or economist to make an impact here.

Technology has become unpopular in many quarters as the cause of planetary pollution and devastation of its resources. Many of our talented students are turned off toward a career in technology in general, and more specifically toward aerospace technology where the recent recession has offered them proof that such a career may have some severe financial obstacles. Students who might have chosen a technical career ten years ago are flooding the medical schools with their applications. For every medical school opening, there are twenty applicants. Meanwhile, some engineering schools are closing and many are retrenching, even though we hear there will be a great shortage of trained engineers within this decade. Even now, 75% of the available jobs are for technically trained graduates for which only 30% of the '74 graduating classes were qualified to fill. We need M.D.'s, but we also need engineers with doctor, master, and bachelor degrees.

Your Institute's Education Committee, under the leadership of Dan DeBra, is meeting this challenge with a vigorous program to reach these students. Through the Technical Committees, there is now a large group of professionals ready to go most anywhere to talk to most anyone on most any technical subject. Perhaps you are one of those volunteers. If you are not, you may wish to let Dan know of your availability. But your contribution does not have to be so formal, and all of us are not spellbinders when faced with an audience.

You do not have to go much farther than your own backyard. Look for that bright youngster who may, or may not, be motivated toward anything. Some may be on the verge or have "dropped out." We know of many rewarding cases where students have been motivated toward a technical career by participating in a school work program or a summer job in a laboratory. The job may be soldering and testing laboratory breadboards, or coding a computer, but the insight given can be just the spark that is needed. Try to find out if your organization has room for such a program and try to interest a bright youngster.

Without even trying, we all at one time or another have an opportunity to say the right, or the wrong, thing to a youngster. Having seen so many of our associates, or having been ourselves, out of a job in the aerospace field, we might too easily accentuate the negative. But the need for high caliber students in technology is real no less than for medicine, and we should give lip service to that fact. When you find that youngster, say the right thing. Please remember that even our relatively weak aerospace industry (to the past decade) provides a healthy, positive cash flow for our balance of payments.

Although federal support of R & D has shown some decline in real dollars, private industry sponsored R & D has more than offset this decline, and the total is estimated to continue to increase. Our competitors in this big game are not cutting their defense budgets, and it is hoped that our rulers allow this nation to maintain a strong defense posture. Historically, this nation has vacillated from isolationism to concern and back again. It will take a steady influx of new talent to maintain or recapture the position our nation needs. As we now watch a relative decline of our strength, it becomes even more imperative that we foster a new generation of concerned, well trained, and talented technologists. We wish to thank the following reviewers who have contributed of their time and knowledge in critiquing the articles for JSR in 1974.

Ralph R. Ragan  
Editor-in-Chief