

# Letters to the Editor

## Electromagnetism

When our space technologists finally inquire they will observe the following:

■ The atmosphere man breathes is charged from 300-600 v./meter (Tromp says up to 1000 v./meter.) being negative at the earth's surface and positive at the ionosphere.

■ Both this electrostatic charge and associated magnetic fields fluctuate at frequencies near man's biological alpha brain rhythm, i.e. 5-13 cycles/sec. The lower end of this spectrum is observed in man's deep trance states.

■ Atmospheric ionic concentrations (positive and negative) and electrostatic-electromagnetic fluctuations which occur with thunderstorms, fog and low-lying clouds could favor induced currents in man's central nervous system, especially the brain, at frequencies tending toward trance states. Decreased ability to resolve light and increased reaction time (degradation of human function) have been repeatedly, scientifically observed under exactly these conditions. Hard science.

■ Pilots attempting low-visibility landings are necessarily functioning in their electromagnetic environment. Occasionally they may become momentarily immobilized (trance state), but they will be unaware of it. One might, however, note the clock second hand having advanced 20-30 sec. with no sense of time lapse for that period. Their reaction times are increased, and light-resolving abilities (instrument interpretation?) decreased under these circumstances.

■ Such a momentary trance reaction at a critical moment in the landing sequence may eventuate in a "state of being" neither trance nor momentary; it is the state of being dead. How soon we recognize these "pilot error" fatalities are in fact mortal proof of this phenomenon will be proportional to the continued cost in lives lost.

■ At such critical moments, speed and direction of flight will affect the frequency and intensity of induced biological phenomena; hence everything could be A-okay on downwind and fatal on final. This is a Doppler-type problem.

■ The January, 1972, Tandy and National Aeronautics and Space Administration fatalities in Texas occurred under exactly the circumstances which produce decreased human reactive capabilities. Many other instances can be found, e.g. the loss of Astronauts See and Bassett in 1966.

■ When our space technologists look at environmental space from the electrostatic-electromagnetic-ionic flow viewpoint and note biological systemic (especially human) responses, much more caution will obtain in frequency and power of radio energy transmission.

Hard medical data implicate such energies in certain industrial brain cancers; they are called astrocytomas.

■ Hard science has demonstrated the reduced human fatigue and improved reactivity to be found in artificially generated electrostatic fields. Cockpits of the entire civil fleet could be equipped for the price of a 727, and, no, I'm not in that business.

Isn't it curious that electrical phenomena largely were discovered by biologists, e.g. Faraday and the Faradic current in frogs' legs? Yet we seem to feel these same magnificently intri-

MAXEY  
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cate biological systems are immune to the very forces which apparently mothered their systemic evolution.

We're wrong in that feeling.

Alternating current was developed by an even more forgotten hero (Can you IEEE's name him?) who was aware of the electrical qualities of our atmosphere. He illuminated 100 40-w. bulbs 20 mi. from a transmitter by radio power. The year? 1910, I believe. His name was Nikola Tesla, not Edison. We have megaHertz instead of megacycles; surely it is time for Tesla current instead of alternating current.

Until this area has received adequate evaluation, I suggest passengers avoid boarding whenever instrument/weather landings are anticipated if in solar storm-sun spot periods. Pilots simply are unaware of what they may be getting suckered into.

It is to be hoped such evaluation is oncoming; Eastern Airlines' Frank J. Haas and Wayne Howlett are to be applauded for their alacrity in this area. Hats off to them and also to James Beal of NASA.

To sum up:

Man is an intricate system, in part electrical. Mother earth with her atmosphere is an intricate system, in part electrical. If we understand and respect each other, a beautiful symbiosis results. If we screw up mom electrically, we may confidently expect a resounding kick in the fanny.

When we wish to perform maximally, why not artificially emulate those of earth's electrical phenomena favoring such performance? Why not in aircraft cockpits?

E. STANTON MAXEY M.D., CFI  
Stuart, Fla.

## Tech Rep's Role

The entire aviation industry and military aviation will be adversely affected by a program which is presently being implemented by the Naval Aviation Engineering Service Unit (NAESU) under the direction of Naval Air Systems Command Headquarters (NAV-AIRSYSCOMHQ), whereby the factory representatives (tech reps) are being replaced with civil service employes.

Having been a tech rep assigned to the military for over 15 years, I have personally witnessed the gradual takeover of our jobs by the federal government.

The beginning of this takeover was first noted by me approximately eight years ago, during the time Mr. McNamara was secretary of defense, and his original scheme, I believe, was designed to increase the number of government jobs.

No doubt his decision was influenced a great amount by erroneous information furnished by his advisers, who for selfish or political reasons were trying to swell the ranks of government employes.

I've been told one reason for replacing the tech rep with a civil servant is a reduction in cost for the same service will be realized. This is a fallacy and no doubt comes from misleading reports which give the salary of a civil servant in comparison to the total cost to contract for a tech rep, which includes his home office support and overhead expenses.

It would be foolish to believe there is no so-called home office support or overhead expense connected with employment of a civil servant.

I have worked with many of them, and knowing what their support cost and fringe benefits include leads me to believe their overhead costs would equal, if not exceed, those of a tech rep.

I firmly believe all jobs in this country, whenever possible, should be filled by private industry, vice government, and that we should be looking for ways to reduce government costs and control. This program is the direct opposite.

At a time when our country is facing extreme austere conditions, it is appalling to me that one bureaucratic organization of the government is allowed to fulfill such a foolish and wasteful hiring program.

The replacement of factory tech reps with government employes will cause undue hardship on the military aviation services, primarily due to the severing of direct line of communications which presently exist through the tech rep directly to the parent manufacturer's engineering and quality assurance departments. This direct liaison is responsible for preventing many catastrophic failures which otherwise cannot be avoided and provides a means whereby time and cost savings can be realized whenever problems need correcting by engineering changes and/or interpretation of procedures are necessary.

Additionally, it will also eliminate the extremely important input to the manufacturer which is now readily available from the tech rep and will stop the vitally important, continuous product improvement programs necessary in preventing wasteful major unit replacements.

With the civil service employe trying to fill the tech rep's job, this direct liaison is lost. The same coverage cannot be provided, thus it is foolish to believe the tech rep's job can feasibly be accomplished by a civil servant.

I feel these reasons alone are justification for reversal of subject program.

I can think of other drawbacks regarding the takeover of private industry jobs by the federal government, but for the sake of keeping this letter short and to the point, they will not be included.

I am quite sure, however, your readers can come up with many more just reasons for a reversal of this foolish and wasteful hiring program and will look forward to reading their comments.

L. D. WEBSTER  
Field Service Representative  
Detroit Diesel Allison Div.  
General Motors Corp.  
Naha, Okinawa

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