

WDTL

17 June 1957

**MEMORANDUM FOR COLONEL TERHUNE**

**SUBJECT: Eighth International Astronautical Congress**

1. The undersigned respectfully requests permission to make arrangements to attend the Eighth International Astronautical Congress to be held in Barcelona, Spain, 6-12 Oct 1957.

a. Justification

Over a period of time, I have become increasingly involved in various types of planning for the future. Examples are:

(1) Technological forecast, 1955-1975, for use of Gen Schriever on ARDC Ballistic Missiles and Space Vehicles Committee.

(2) R-W Study on Follow-on Missiles, Satellites, and Space Vehicles for AFDAP.

(3) Speech for Gen Schriever to present to Astronautics Symposium at San Diego on the "ICEM - A Step Toward Space Conquest."

(4) Material for Gen Schriever to present to Scientific Advisory Board on "The Future of Ballistic Missiles".

(5) R-W Study of Technical Programs and Management of an AF Guided Missile Center.

(6) Review of ARDC Technical Program Planning Documents from the standpoint of having these documents reflect true ballistic missile and space vehicle technical requirements for the future.

(7) Review of R-W research proposals to determine degree of applicability to immediate and future requirements.

(8) Numerous small studies contributing to plans for the future, such as solid propellants, nuclear vs chemical powered rockets, etc.

This type of activity has required that I keep in very close touch with everything that is going on in this area. My position has helped considerably in this respect, as I have numerous contacts with industry (both in and outside our program), research organizations, and educational institutions. I have also had the opportunity to attend a reasonable number of symposia, all of which have been sponsored or co-sponsored by ARDC agencies with one exception. This exception was a local IAS Meeting for which I was the Chairman of the morning session.

Contacts such as noted above have afforded me a fair cross-section view of U.S. technical thinking in various areas and have allowed me to make rational estimates of technical possibilities for the future and to weigh the estimates of others.

This Astronautical Congress would give me the chance of determining the status of foreign ideas. In many foreign countries, scientists are limited in their actual accomplishments by funds or a ban on certain advanced work (Germany), but there is no limit to the amount of thinking that these scientists can do. The foreign field then presents an opportunity for learning of the bizarre ideas that have come to light unhampered by knowledge of hardware limitations, which may affect thinking in this country.

I would also propose on this trip to contact the Brussels Office of Hq ARDC and the Technical Intelligence Office at Wiesbaden, Germany. In our FY '57 and FY '58 budgets, \$75,000 was set aside for specific work that could be accomplished on an unclassified basis by foreign scientists in the propulsion, guidance, and nose cone areas. During FY '57, these funds were reprogrammed as no-one had the opportunity to take a first-hand look at the possibilities. One attempt was made by Dr. Millard Barton of R-W during his visit to the Applied Mechanics Congress last fall. This, however, was unfruitful as this Congress was held in Brussels and the ARDC Office was preoccupied with those activities. Gen Flickinger has made a couple of trips to AFEMD with regard to aid that they could furnish to our program, but he has been preoccupied with other matters, and although on the last trip, he brought over some information on an extremely interesting project, insufficient details were available for an evaluation. A first-hand contact is necessary.

2. I present three plans for accomplishing this trip in order of my priority.

| PLAN            | COST TO GOV'T           | REMARKS            |
|-----------------|-------------------------|--------------------|
| a. Normal TDY . | <u>Transportation</u>   |                    |
| 21 days         | Rd trip to Wash. 283.80 |                    |
|                 | Paris ) 99.20 Rd Trip   | MATS transatlantic |
|                 | Barcelona )             | transportation     |
|                 | Paris ) 32.40 Via       | utilized           |
|                 | Frankfurt ) Brussels    |                    |
|                 | Per Diem 252.00         |                    |
|                 | <u>Total</u> \$667.40   |                    |

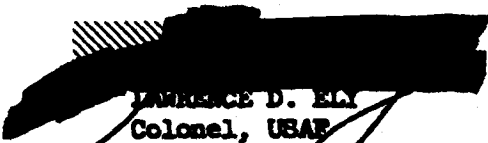
| PLAN                                   | COST TO GOV'T                  | REMARKS                                                                                                                                     |
|----------------------------------------|--------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| b. TDY at no expense to Govt - 21 days | Transportation 0<br>Per Diem 0 | This would provide me with orders permitting MATS transatlantic transportation. All non-military transportation would be at my own expense. |
| c. Leave 30 dys                        | Transportation 0<br>Per Diem 0 | I would still plan to use MATS for transatlantic flight on a "space available" basis, therefore require additional time.                    |

Plan a. does not appear to cost the Government anymore than many trips within the U.S. of equal duration.

Plan b. is proposed in case this is considered somewhat of a "boondoggle".

Plan c. is proposed in case the trip is considered a complete "boondoggle". I will lose approximately three weeks leave this fiscal year, so taking this trip on a leave status is of no major concern to me as contrasted with Plan b.

Plan a. is, of course, preferred. If I went under Plan c., I would feel no responsibility for submitting a trip report, although, I would still obtain the desired information.

  
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 Colonel, USAF  
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