

DEPARTMENT OF THE AIR FORCE  
HEADQUARTERS UNITED STATES AIR FORCE  
WASHINGTON, D.C.



REPLY TO  
ATTN OF: AFRDSD

4 SEP 1960

SUBJECT: Review of MOL Residuals - MOL 4 PI  
Extended Performance Flight Computer (U)

TO: SAFRD (Dr. Yarymovych) SEP 8 1960

1. The 4 Pi Extended Performance Flight Computer is also known as the Data Computation Subsystem Group (DCSG). The DCSG consists of the following components:

Airborne Digital Computer	(ADC)
Laboratory Data Adapter Unit	(LDAU)
Auxiliary Memory Unit	(AMU)
Printer Unit	(PU)
Display Unit	(DU)
Keyboard Unit	(KU)

The ADC is a general purpose digital computer with a flexible data processing capability and a 24K word memory. Three DCSG's are man rated and qualified for flight.

2. The following potential uses for the Data Computation Subsystem Group have been identified:

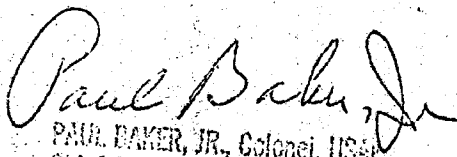
a. Air Force Avionics Laboratory (AFAL-AVN): Three IBM 4 Pi-EP computers with associated peripherals (3 DCSG's) are proposed to be used to provide most if not all of the ground and airborne navigation and data processing requirement of the ICNI "thin thread" demonstration program. This equipment will also improve the AFAL posture for developing computer software and conducting tests and evaluation of the 621B navigation satellite receivers. No funds have yet been identified for purchase of the necessary computers under the AFAL proposed effort. Another potential Avionics Laboratory user is the Teledyne DIL (Doppler, Inertial, Loran) Program.

b. Space and Missile Systems Organization (SAMSO-SMTG): Three DCSG's are proposed for use in the Advanced Space Guidance Program's Space Precision Attitude Reference System (SPARS) development. Two would be used in orbital tests of the SPARS and one would be backup. Present planning calls for use of three surplus UNIVAC 1824's. These, however, have limited memory. Use of the MOL DCSG's would permit other experiments to be performed in conjunction with SPARS including the measurement of the earth's radiant profile for surveillance system applications.

DECLASSIFIED AT 3 YEAR INTERVALS;  
DECLASSIFIED AFTER 12 YEARS.  
DOD DIR. 5200.10

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3. The users identified above are a result of a survey of programs in the Directorate of Space, and the Directorate of Development (Aeronautical Division and Science and Technology Division).



PAUL BAKER, JR., Colonel, USAF  
Chief, Technology Division  
Directorate of Space, DCS/R&D

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