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6 June 1960 9 July

Subj: Satellite Planning for FY 61

1. The Solar Radiation Satellite is now ready for launch with Transit 2A. Two flight units are complete and components are being completed for the third flight unit. If the 2A shot fails, the third flight unit will be completed so that two flight models will be available for the Transit 2B launch in November. The costs for this back-up shot are as follows:

Laboratory tests (recheck 2 flight units)	20 K
Field tests	56 ~~16 K~~
Travel	20 K
~~Code 5430 Travel~~ and Miscellaneous	~~20 K~~
Total	76 K

This is based on flying packages without modifications. If any changes are required in either the data link or the cover, additional funds will be requested.

2. If the Transit 2A shot is successful, the next shot would include an L Band experiment and a modified Solar Radiation experiment using two X-Ray detectors on slightly different wavelengths. The compatability of these two experiments is good and the X-Ray data is quite valuable and no change in cover should be considered for this shot. The cost estimates for this are as follows:

Cost for Solar Radiation Experiment for one launch This covers development of additional equipment, salaries, travel, etc. for Code 7120	100 K	150
Cost for three additional flight models of the satellite This includes transmitters, receivers, power supplies, telemetry systems, shells and structures, environmental testing, salaries and travel.	450 K	620
Costs for ~~Code 5430~~ ECM experiment Included are costs for four men for six months (L Band) experiment and ground readout instrumentation.	110 K	250
		1,020 K

Costs of satellite for December launch

19 July

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3. The present Transit schedule includes launches in November, December 1960 and February 1961. It is assumed that two out of three of these launches will be suitable to the requirements of the Solar Radiation Satellite. The extended program should include plans for a more sophisticated intercept experiment. Detailed ~~Measurements are needed of PRF,~~ [redacted] and r. f. frequency with special attention on specific targets, will be the objective. This will necessitate ~~These additional requirements will require~~ additional space for electronics in the satellite and a larger share of the solar power will have to be allocated to the prime experiment and less to the cover. Therefore, it would be desirable to change the cover to a Biological experiment, ~~with a Stable Oscillator for Navigation studies~~. These is can be lower power systems and a telemetry system for the Biological experiment could easily be switched to [redacted] and r. f. frequency data after the one week life of the biological sample. The costs for this work are estimated as follows:

Development Costs	400 K	590 K
Cost of cover		
University of Maryland	20 K	215 K
Code 5170 Sensors	100 K	
[redacted]	95 K	
Cost includes Data Link		
Shell		
Solar Power Supply		
Telemetry System		
Thermal Design		
Environmental Tests		
Field Operations		
Costs for three flight models of the Satellite	640 K	760 K
Total Cost FY 61 for Code 5170	$1,255 K	~~$1,255 K~~
Code 5430 Budget Estimate for FY 61		
Developmental Costs for four men for six months	40 K	
Major Procurements	150 K	
Intercept Station Instrumentation	120 K	
Total Cost FY 61 for Code 5430	$ 310 K	~~$ 310 K~~
Total Cost of Satellite for Frebruary launch		~~$1,565,000~~ 1,565

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