~~TOP SECRET~~

SOLAR RADIATION VI EXPERIMENT

The experiments scheduled for the NRL Solar Radiatio[illegible] are mainly a continuation of solar monitoring studies first carried out successfully in the 1960 ETA-2 Satellite. These studies have as their goal the determination of the time history of the sun's x-ray and ultra-violet emissions. It has already been found that solar x-ray emission is the most sensitive index of solar activity known. It is to be expected that more detailed analysis of the various phenomena comprising solar activity by means of this x-ray tool will help in our understanding of solar events and will aid in the prediction of safe travel in space.

The set of experiments scheduled for SR-VI include a main experiment and three secondary experiments. The main experiment is a study of the hardness spectrum of the solar x-ray emission and of its time variation. This study will be carried out with ion chamber x-ray detectors covering the following nominal spectral bands:

0.1 - 1.6 A
0.5 - 3.0 A
2.0 - 6.0 A
2.0 - 8.0 A
8.0 - 16.0 A
44.0 - 60.0 A

The outputs of the above chambers will be telemetered to earth in real time. A comparison of the outputs of these chambers should provide a measure of the effective emission temperature. This will provide a measure of cooling rates, which in turn may permit determination of whether collisional or adiabatic cooling processes are dominant.

The following secondary experiments are also planned for SR-VI. To test the effectiveness of magnetic shielding for the x-ray ion chambers, a 2-8 A x-ray ion chamber will be flown behind a dummy magnet. To provide data on variations in the longwave solar x-ray emission a magnetically protected 44-60 A x-ray detector will be flown.

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C05025906

FORM A-1 JOB ORDER ESTIMATE (FALL, FY 1963)

A. Title (or brief description of proposed problem): 62

~~SECRET~~ Intercept System, Light [redacted] Subminiaturized for Supersonic Vehicles

B. CRL Problem No. 54 R06-29

C. Branch Code 5430

D. Sponsors Project Number

RT 7042-004/6521/F019-02-09

E. FINANCIAL ESTIMATES	1ST HALF FY'63		2ND HALF FY'63		TOTAL FY 1964		TOTAL FY 1965	
COST ELEMENT	Jul-Dec 1962		Jan-Jun 1963		Jul'63-June'64		Jul'64-June'65	
	MW	Amount	MW	Amount	MW	Amount	MW	Amount
DIVISION ROUTINE COSTS:								
1. Straight Time Pay + Fringe Benefits	99 132	27.5 31.6	161	38.6	315	77.5	315	79.4
2. Overtime	27 ~~20~~	5.2 ~~4.1~~	20	3.9 ~~4.1~~	40	8.2	40	8.2
3. Materials, Travel & Misc.	X	133.3 ~~241.1~~	X	450.0	X	650.0	X	650.0
SERVICE DIVISION SUPPORT: 4. ESD Pay etc.	298 ~~262~~	62.2 ~~42.0~~	220	35.2	438	70.0	438	70.0
5. ESD Non-Salary Costs	X	27.1 ~~6.0~~	X	3.0	X	6.0	X	6.0
6. Other Pay etc. (PW, CBA, etc.)	10 ~~17~~	1.4 ~~2.5~~	5	0.8	10	1.5	10	1.5
7. Other Non-Salary Costs	X	2.0 ~~2.0~~	X	2.0	X	3.0	X	3.0
APPLIED OVERHEAD: 8. Gen. & Adm. Overhead	534 ~~431~~	63.4 ~~56.0~~	406	50.2 ~~52.8~~	803	106.0	803	106.0
9. Division Indirect	126 ~~152~~	3.3 ~~4.9~~	181	6.0 ~~5.8~~	355	11.7	355	12.1
SUBTOTAL ROUTINE 10. Lines (1) through (9)	X	330.4 ~~390.1~~	X	537.7 ~~592.3~~	X	933.9	X	936.2
MAJOR CONTRACTS 11. & PROCUREMENTS	X	2535.[illegible] ~~1000.0~~	X	1873.7 ~~1150.0~~	X	900.0	X	850.0
TOTAL 12. (Line 10 + Line 11)	X	[illegible] ~~1390.1~~	X	2486.4 ~~1742.3~~	X	1833.9 ~~2683.9~~	X	1786.2
13. Summer Employee Man-Weeks incl. in Line 1		X		X		X		X
14. WAE Man-Weeks included in Line 1	5	X		X		X		X

Round dollar estimates to nearest $100 and express in thousands, e.g. $6,421 = 6.4.

CODE 3100 USE ONLY BELOW THIS LINE

	July Budget	Extrapolation			Division Request			Proposed Budget		
		ONR	Other	Total	ONR	Other	Total	ONR	Other	Total
Reg. M-Y	5.0		4.4	4.4	—	5.7	5.7	—	5.7	5.7
R.P.M.										
Routine	~~497.8~~		[illegible]	[illegible]	—	923.2	923.2	—	920.6	[illegible]
Maj. Proc.	1,000.0							—	2150.0	2150.0
Total	1,497.8	[redacted]							3070.6	3070.6

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[redacted]

F. SOURCES OF FINANCIAL SUPPORT: (FISCAL YEAR 1964)

Please supply fiscal year 1964 support information on the chart below.

(1) Bureau or Agency	(2) % Should Support	(3) Probable Support Amount	(4) Cognizance or Interest Code	(4) Cognizance or Interest Name
BUWEPS	100	2683.9	RTPA-30	S. Hubbard
GENERAL ONR				
TOTAL	100	2683.9		

G. COMMENTS RE FINANCIAL SUPPORT OR EXTRAORDINARY CHANGES IN PROJECTED COSTS

Heavy rapid shipments to overseas sites and procurement of many expensive special components will result in higher rates for line 3 than experienced to date.

H. MAJOR CONTRACTUAL SERVICES AND PROCUREMENTS (ITEMS OF $5,000 OR MORE)

DESCRIPTION	1ST HALF FY'63 Jul-Dec 1962	2ND HALF FY'63 Jan-Jun 1963	TOTAL FY 1964 Jul'63-June'64	TOTAL FY 1965 Jul'64-June'65
Coop (NON ADD) Code 5170		4784.0		
Coop (NON ADD) Code 7100	50.0			
FIELD SITE UP-DATING:				
Timing Systems	100.0	50.0	25.0	25.0
Receiving systems	100.0	50.0	50.0	50.0
Command System	75.0	50.0	50.0	50.0
Recording system	-	50.0	25.0	25.0
FLIGHT EQUIPMENT:				
Filters and Mounts	75.0	100.0	100.0	100.0
Amplifiers	50.0	50.0	100.0	100.0
Pre-Amplifiers	50.0	50.0	50.0	50.0
Experimental Nuclear Batteries	-	100.0	100.0	100.0
R and D REFINEMENTS				
Frequency	75.0	150.0	50.0	50.0
[redacted]	75.0	50.0	50.0	50.0
Location	100.0	50.0	50.0	50.0
Miniature Recorder	200.0	100.0	50.0	50.0
4-channel system	-	100.0	50.0	-
New Data/Link Frequency	-	50.0	50.0	50.0
Test Equipment	50.0	100.0	50.0	50.0
Hybla Valley up-dating	50.0	50.0	50.0	50.0
TOTAL (Same as Line 11)	1000.0	1150.0	900.0	850.0

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[redacted]

HANDLE VIA BYEMAN CONTROL SYSTEM ONLY

C05025906

FORM A-1 JOB ORDER ESTIMATE (FALL, FY 1963)

B. NRL Problem No. 54 R06-20

C. Branch Code 5430

D. Sponsors Project Number
RAV-06-R-001/6521/F010-02-02
RAV-06-R-002/6521/S315-00-01
RAV-06-R-007/6521/F010-02-01

A. Title (or br[redacted]ription of proposed problem):

~~TOP SECRET~~ [redacted] Oct '62

Wide Open D/F Research & Development
HL-ALD/A-(IB)

15.0 K

E. FINANCIAL ESTIMATES	1ST HALF FY'63		2ND HALF FY'63		TOTAL FY 1964		TOTAL FY 1965	
COST ELEMENT	Jul-Dec 1962		Jan-Jun 1963		Jul'63-June'64		Jul'64-June'65	
	M/W	Amount	M/W	Amount	M/W	Amount	M/W	Amount
DIVISION ROUTINE COSTS:								
1. Straight Time Pay + Fringe Benefits	~~5~~	~~1.2~~	23	5.5	45	11.1	45	11.3
2. Overtime								
3. Materials, Travel & Misc.		~~0.5~~		2.2 ~~2.4~~		6.0		5.8
SERVICE DIVISION SUPPORT:								
4. ESD Pay etc.	~~2~~	~~0.3~~	10	1.6	15	2.4	15	2.4
5. ESD Non-Salary Costs		~~0.2~~		0.5		1.0		1.0
6. Other Pay etc. (PW, CBA, etc.)								
7. Other Non-Salary Costs								
APPLIED OVERHEAD:								
8. Gen. & Adm. Overhead	~~7~~	~~0.9~~	33	4.1 ~~4.3~~	60	8.0	60	8.0
9. Division Indirect	~~5~~	~~0.2~~	23	.8 ~~0.7~~	45	1.5	45	1.5
SUBTOTAL ROUTINE 10. Lines (1) through (9)		2 ~~3.3~~		14.7 ~~15.0~~		30.0		30.0
MAJOR CONTRACTS 11. & PROCUREMENTS								
TOTAL 12. (Line 10 + Line 11)		2 ~~3.3~~		14.7 ~~15.0~~		30.0		30.0
13. Summer Employee Man-Weeks incl. in Line 1								
14. WAE Man-Weeks included in Line 1								

Round dollar estimates to nearest $100 and express in thousands, e.g. $6,421 = 6.4.

CODE 3100 USE ONLY BELOW THIS LINE

	July Budget	Extrapolation ONR	Extrapolation Other	Extrapolation Total	Division Request ONR	Division Request Other	Division Request Total	Proposed Budget ONR	Proposed Budget Other	Proposed Budget Total
Reg. M-Y	1.0			-0-	—	.5	.5	—		
R.P.M.										
Routine	~~TOP SECRET~~		4	6.4	—	15.2	15.2	—	14.9	14.9
Maj. Proc.	-0-			[redacted]		HANDLE VIA		—	—	—
Total	27.7						SYSTEM ONLY		14.9	14.9