

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

CHRONOLOGICAL HISTORY

FISCAL YEAR 1965

BUDGET SUBMISSION

Prepared by:
Office of Administration
Budget Operations Division
Code BT-1 EXT. 24146

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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

Chronological History of the FY 1965 Budget Submission
(In thousands of dollars)

SUMMARY

I T E M	A U T H O R I Z A T I O N							A P P R O P R I A T I O N					
	NASA Budget Submission	House Comm. Action (HR 10456; Rep 1246) (3/18/64)	House and House Comm. Approved Budget (3/25/64)	NASA Reclama Action (4/3/64)	NASA Revised Budget (4/3/64)	Senate Comm. Appd 6/2/64 Senate appd (6/24/64)	Conf. Comm. appd. 7/1/64 Auth. per PL 88-369 (7/11/64)	House Comm. Approved (5/18/64)	House Approved (5/21/64)	Senate and Senate Comm. Approved (7/30/64)	Conf. Comm. Appd. 8/12/64 Auth. per PL 88-507 (8/30/64)		
R&D Appropriation:													
OMSF	\$3,011,900	-3,900	3,008,000	+3,900	3,011,900	3,011,900	3,011,900						
OSSA	776,900	-34,500	742,400	+34,500	776,900	755,200	745,650						
OART	320,300	-3,400	316,900	+7,400	324,300	316,900	316,900						
OTDA	267,900	-12,000	255,900	+12,000	267,900	265,400	261,900						
OTUPP	5,000	-250	4,750	+250	5,000	4,750	4,750						
TOTAL R&D	4,382,000	-54,050	4,327,950	+58,050	4,386,000	4,354,150	4,341,100	4,345,000	2/	4,413,594 ^{3/}	4,363,594 ^{4/}		
C of F Appropriation:													
OMSF	224,910	-21,491	203,419	+22,491	225,910	213,664.5	213,664.5						
OSSA	7,359	-147	7,212	+147	7,359	7,212	7,212						
OART	27,591	-3,931	23,660	+3,931	27,591	26,290	26,290						
OTDA	6,140	-2,096	4,044	+2,096	6,140	5,714	5,714						
Assoc. Administrator	15,000	-5,000	10,000	+5,000	15,000	10,000	10,000						
TOTAL C OF F	281,000	-32,665	248,335	+33,665	282,000	262,880.5	262,880.5	245,000	2/	262,880.5	262,880.5		
AO Appropriations:													
OMSF	304,570	-15,228.5	289,341.5	+15,228.5	304,570	*	*						
OSSA	93,949	---	93,949.0	---	93,949	*	*						
OART	167,138	-8,246.0	158,892.0	+8,246.0	167,138	*	*						
Supporting Operations	75,343	---	75,343.0	---	75,343	*	*						
TOTAL AO	641,000	-23,474.5	617,525.5	+23,474.5	641,000	629,262.7	623,525.5	610,000	2/	623,525.5	623,525.5		
TOTAL NASA	\$5,304,000	-110,189.5	5,193,810.5	+115,189.5	5,309,000 ^{1/}	5,246,293.2	5,227,506	5,200,000	2/	5,300,000 ^{3/}	5,250,000 ^{4/}		

1/Includes \$5,000,000 additional authorization for projects added by the House action.

*Undistributed.

2/NASA Appropriations deleted from Bill on "Point of Order" (No Authorization).

3/The Senate included \$72,494 of the \$141,000 supplemental appropriation request against prior year authorization.

4/Includes appropriation against prior year authorization.

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

Chronological History of the FY 1965 Budget Submission
(In thousands of dollars)

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I T E M	A U T H O R I Z A T I O N							A P P R O P R I A T I O N			
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Research & Development Appropriation:	4,382,000	-54,050	4,327,950	+58,050	4,386,000	4,354,150	4,341,100	4,345,000		4,413,594	4,363,594
OFFICE OF MANNED SPACE											
FLIGHTS	3,011,900	-3,900	3,008,000	+3,900	3,011,900	3,011,900	3,011,900				
Gemini Program	(308,400)	---	(308,400)	---	(308,400)	(308,400)	(308,400)				
Spacecraft	168,900	---	168,900	---	168,900	168,900	168,900				
Launch vehicles	111,300	---	111,300	---	111,300	111,300	111,300				
Gemini support	28,200	---	28,200	---	28,200	28,200	28,200				
Apollo Program	(2,677,500)	---	(2,677,500)	---	(2,677,500)	(2,677,500)	(2,677,500)				
Spacecraft	945,800	---	945,800	---	945,800	945,800	945,800				
H-1 Engine	9,800	---	9,800	---	9,800	9,800	9,800				
RL-10 Engine	17,900	---	17,900	---	17,900	17,900	17,900				
F-1 Engine	64,100	---	64,100	---	64,100	64,100	64,100				
J-2 Engine	61,600	---	61,600	---	61,600	61,600	61,600				
Saturn I	120,600	---	120,600	---	120,600	120,600	120,600				
Saturn IB	260,100	---	260,100	---	260,100	260,100	260,100				
Saturn V	988,400	---	988,400	---	988,400	988,400	988,400				
Apollo support	209,200	---	209,200	---	209,200	209,200	209,200				
Advanced Missions Program	(26,000)	(-3,900)	(22,100)	(+3,900)	(26,000)	(26,000)	(26,000)				
Advanced studies	26,000	-3,900	22,100	+3,900	26,000	26,000	26,000				
OFFICE OF SPACE SCIENCE AND APPLICATIONS	776,900	-34,500	742,400	+34,500	776,900	755,200	745,650				
Geophysics and Astronomy Program	(190,200)	(-16,000)	(174,200)	(+16,000)	(190,200)	(180,700)	(177,450)				
SR&T	14,800	---	14,800	---	14,800	14,800	14,800				
Solar observatories	22,100	-2,500	19,600	+2,500	22,100	19,600	19,600				
Astronomical observatories	51,000	-7,000	44,000	+7,000	51,000	44,000	44,000				
Geophysical observatories	55,400	-6,500	48,900	+6,500	55,400	55,400	52,150				
Explorers	31,900	---	31,900	---	31,900	31,900	31,900				
Sounding rockets	15,000	---	15,000	---	15,000	15,000	15,000				
Lunar and Planetary Exploration Program	(300,400)	(-17,300)	(283,100)	(+17,300)	(300,400)	(295,400)	(283,100)				
SR&T	18,100	---	18,100	---	18,100	18,100	18,100				
Manned space science	11,000	---	11,000	---	11,000	11,000	11,000				
Ranger	10,800	---	10,800	---	10,800	10,800	10,800				
Surveyor lander	136,000	-12,300	123,700	+12,300	136,000	136,000	123,700				
Lunar orbiter	49,300	-5,000	44,300	+5,000	49,300	44,300	44,300				
Mariner	54,100	---	54,100	---	54,100	54,100	54,100				
Pioneer	21,100	---	21,100	---	21,100	21,100	21,100				

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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

Chronological History of the FY 1965 Budget Submission
(In thousands of dollars)

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	NASA Budget Submission	House Comm. Action (HR 10456) (Rep 1240) (3/18/64)	House and House Comm. Approved Budget (3/25/64)	NASA Reclama Action (4/3/64)	NASA Revised Budget (4/3/64)	Senate Comm. Appd 6/2/64 Senate Appd (6/24/64)	Conf. Comm. appd 7/1/64 Auth. per PL 88-369 (7/11/64)	House Comm. Approved (5/18/64)	House Approved (5/21/64)	Senate and Senate Comm. Approved (7/30/64) (8/5/64)	Conf. Comm. Appd. 8/12/64 Auth. per PL 88-507 (8/30/64)		
Sustaining University Program	(46,000)	---	(46,000)	---	(46,000)	(40,000)	(46,000)						
Training	25,000	---	25,000	---	25,000	20,000	25,000						
Facilities	10,000	---	10,000	---	10,000	9,000	10,000						
Research	11,000	---	11,000	---	11,000	11,000	11,000						
Launch Vehicle Development Program	(128,200)	---	(128,200)	---	(128,200)	(128,200)	(128,200)						
SR&T	4,500	---	4,500	---	4,500	4,500	4,500						
Centaur development	92,000	---	92,000	---	92,000	92,000	92,000						
FLOX development	17,500	---	17,500	---	17,500	17,500	17,500						
Operational vehicle support	14,200	---	14,200	---	14,200	14,200	14,200						
Bioscience Program	(31,000)	---	(31,000)	---	(31,000)	(31,000)	(31,000)						
SR&T	11,800	---	11,800	---	11,800	11,800	11,800						
Flight program (Biosatellite)	19,200	---	19,200	---	19,200	19,200	19,200						
Meteorological Satellites Program	(37,500)	---	(37,500)	---	(37,500)	(37,500)	(37,500)						
SR&T	6,600	---	6,600	---	6,600	6,600	6,600						
Synchronous meteorological satellite experiments	3,200	---	3,200	---	3,200	3,200	3,200						
TIROS	5,800	---	5,800	---	5,800	5,800	5,800						
Nimbus	18,900	---	18,900	---	18,900	18,900	18,900						
Meteorological sounding rockets	3,000	---	3,000	---	3,000	3,000	3,000						
Communications Satellites Program	(12,600)	(-1,200)	(11,400)	(+1,200)	(12,600)	(11,400)	(11,400)						
SR&T	3,500	-1,200	2,300	+1,200	3,500	2,300	2,300						
Echo II	300	---	300	---	300	300	300						
Relay	1,800	---	1,800	---	1,800	1,800	1,800						
Syncom	2,000	---	2,000	---	2,000	2,000	2,000						
Early gravity gradient experiment	5,000	---	5,000	---	5,000	5,000	5,000						
Advanced Technological Satellites Program	(31,000)	---	(31,000)	---	(31,000)	(31,000)	(31,000)						
SR&T	1,100	---	1,100	---	1,100	1,100	1,100						
Advanced technological satellites	29,900	---	29,900	---	29,900	29,900	29,900						

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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

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OFFICE OF ADVANCED RESEARCH AND TECHNOLOGY	320,300	-3,400	316,900	+7,400	324,300	316,900	316,900						
Basic Research Program	(21,000)	---	(21,000)	---	(21,000)	(21,000)	(21,000)						
SR&T	21,000	---	21,000	---	21,000	21,000	21,000						
Space Vehicle System Program	(38,800)	(-1,800)	(37,000)	(+1,800)	(38,800)	(37,000)	(37,000)						
SR&T	26,300	*	*	*	26,300	*	*						
Scout reentry heating experiments	2,000	*	*	*	2,000	*	*						
FIRE	3,000	*	*	*	3,000	*	*						
Saturn-launched meteoroid experiments	2,600	*	*	*	2,600	*	*						
Small space vehicle flight experiments	3,000	*	*	*	3,000	*	*						
Lifting body flight and landing tests	1,900	*	*	*	1,900	*	*						
Electronic Systems Program	(28,400)	(-1,400)	(27,000)	(+1,400)	(28,400)	(27,000)	(27,000)						
SR&T	25,400	*	*	*	25,400	*	*						
Small flight projects	3,000	*	*	*	3,000	*	*						
Human Factor Systems Program	(16,200)	(-700)	(15,500)	(+700)	(16,200)	(15,500)	(15,500)						
SR&T	13,200	*	*	*	13,200	*	*						
Small biotechnology flight projects	3,000	*	*	*	3,000	*	*						
Nuclear-Electric Systems Program	(48,100)	(-1,000)	(47,100)	(+1,000)	(48,100)	(47,100)	(47,100)						
SR&T	25,000	*	*	*	25,000	*	*						
SNAP-8 development	18,000	*	*	*	18,000	*	*						
Space electric rocket test (SERT)	5,100	*	*	*	5,100	*	*						
Nuclear Rockets Program	(58,000)	(-1,000) ^{1/}	(57,000)	(+1,000)	(58,000)	(57,000) ^{2/}	(57,000)						
SR&T	23,000	*	*	*	23,000	*	*						
NERVA	34,500	*	*	*	34,500	*	*						
NRDS	500	*	*	*	500	*	*						
Chemical Propulsion Program	(59,800)	(+3,000)	(62,800)	(+1,000)	(63,800)	(62,800)	(62,800)						
SR&T	21,800	+4,000	25,800	---	25,800	25,800 ^{2/}	25,800						
Experimental engines	38,000	-1,000	37,000	+1,000	38,000	37,000	37,000						

*Undistributed.

^{1/}See enclosed House Authorization Committee restrictions.

^{2/}See enclosed Senate Authorization Committee Comments.

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Space Power Program	(13,000)	(-500)	(12,500)	(+500)	(13,000)	(12,500)	(12,500)						
SR&T	13,000	-500	12,500	+500	13,000	12,500	12,500						
Aeronautics Program	(37,000)	1/	(37,000)	---	(37,000)	(37,000)	(37,000)						
SR&T	9,400	*	*	*	9,400	9,400 ^{2/}	9,400						
X-15A	900	*	*	*	900	900	900						
Supersonic transport	24,700	*	*	*	24,700	24,700	24,700						
V/STOL	2,000	*	*	*	2,000	2,000	2,000						
OFFICE OF TRACKING AND DATA ACQUISITION	267,900	-12,000	255,900	+12,000	267,900	265,400	261,900						
Tracking and Data Acquisition Program	(267,900)	(-12,000)	(255,900)	(+12,000)	(267,900)	(265,400)	(261,900)						
SR&T	15,500	---	15,500	---	15,500	15,500	15,500						
Network operations	99,800	-7,000	92,800	+7,000	99,800	99,800	96,300						
Equipment and components	152,600	-5,000	147,600	+5,000	152,600	150,100	150,100						
OFFICE OF TECHNOLOGY UTILIZATION AND POLICY PLANNING	5,000	-250	4,750	+250	5,000	4,750	4,750						
Technology Utilization Program	(5,000)	(-250)	(4,750)	(+250)	(5,000)	(4,750)	(4,750)						
Research and development	5,000	-250	4,750	+250	5,000	4,750	4,750						
Construction of Facilities Appropriation:	281,000	-32,665	248,335	+33,665	282,000	262,880.5	262,880.5	245,000		262,880.5	262,880.5		
AMES RESEARCH CENTER	(6,081)	(-3,043)	(3,038)	(+3,043)	(6,081)	(5,668)	(5,668)						
Administrative manage- ment building	1,455	-237	1,218	+237	1,455	1,218	1,218						
Flight simulator for advanced aircraft	2,630	-2,630	---	+2,630	2,630	2,630	2,630						
Instrument building extension	1,996	-176	1,820	+176	1,996	1,820	1,820						
ELECTRONICS RESEARCH CENTER	(10,000)	---	(10,000)	---	(10,000)	(10,000)	(10,000)						
Center support facilities	1,950	---	1,950	---	1,950	1,950	1,950						
Electronic components lab.	3,200	---	3,200	---	3,200	3,200	3,200						
Engineering and administrative bldg.	1,850	---	1,850	---	1,850	1,850	1,850						
Qualification and standards laboratory	3,000	---	3,000	---	3,000	3,000	3,000						

*Undistributed.

1/See enclosed House Authorization Committee restrictions.

2/See Senate Authorization Committee Comments.

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GODDARD SPACE FLIGHT CENTER	(1,300)	(-79)	(1,221)	(+79)	(1,300)	(1,221)	(1,221)						
Earth albedo and infra- red simulation system for the space environ- ment simulator	500	---	500	---	500	500	500						
STADAN engineering and real time station	400	-35	365	+35	400	365	365						
Relocation of Wallops Island training facility	400	-44	356	+44	400	356	356						
JET PROPULSION LABORATORY	(3,714)	(-132)	(3,582)	(+132)	(3,714)	(3,582)	(3,582)						
Addition to spacecraft development engineering bldg. 233	564	-19	545	+19	564	545	545						
25-foot simulator modification	2,350	-38	2,312	+38	2,350	2,312	2,312						
Utilities installations	400	-35	365	+35	400	365	365						
Supporting services bldg. (Edwards Test Station)	400	-40	360	+40	400	360	360						
KENNEDY SPACE CENTER	(91,261)	(-7,667) ^{1/}	(83,594)	(+8,967)	(92,561)	(87,070)	(87,070)						
Addition to manned spacecraft operations and checkout bldg.	16,316	*	*	*	16,316	*	*						
Advanced Saturn launch Complex No. 39	63,284	*	*	*	63,284	*	*						
Extension to central supply Complex	952	*	*	*	952	*	*						
Manned spacecraft static test facility	2,780	*	*	*	2,780	*	*						
Propellant systems components laboratory	588	*	*	*	588	*	*						
Utility installations - New Area	5,600	*	*	*	5,600	*	*						
Add. to unmanned space- craft explosive safe assembly complex	570	---	570	---	570	570	570						
Modif. to Centaur launch Complex No. 36	451	---	451	---	451	451	451						
Modif. to launch complex No. 17	465	---	465	---	465	465	465						
Spin balance facilities for unmanned space- craft	255	---	255	---	255	255	255						
Public Facilities Center	---	+1,000	1,000	---	1,000	*2/	3/						
Apollo network ground stations - New	---	+285	285	+15	300	285	285						

*Undistributed.

^{1/}Excludes \$1,000,000, a new project, and \$285,000 transferred from the Various Location portion of CoF budget submission.

^{2/}See Senate Authorization Committee Comments.

^{3/}See Conference Report Comments on page 18.

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LANGLEY RESEARCH CENTER	(4,454)	(-516)	(3,938)	(+516)	(4,454)	(3,938)	(3,938)						
Thermal control housing and bldg. addition for dynamics research lab.	801	-40	761	+40	801	761	761						
Fatigue research lab.	1,221	-122	1,099	+122	1,221	1,099	1,099						
Central high pressure air supply	2,077	-337	1,740	+337	2,077	1,740	1,740						
Utility improvements - electrical system	355	-17	338	+17	355	338	338						
LEWIS RESEARCH CENTER	(810)	(-40)	(770)	(+40)	(810)	(770)	(770)						
138-34.5 KV Electrical power substation	810	-40	770	+40	810	770	770						
MANNED SPACECRAFT CENTER	(25,166)	(-2,517)	(22,649)	(+2,517)	(25,166)	(23,907.5)	(23,907.5)						
Modification to environmental testing laboratory	9,416	*	*	*	9,416	*	*						
Electronic systems compatibility facility	4,110	*	*	*	4,110	*	*						
Lunar mission and space exploration facility	2,647	*	*	*	2,647	*	*						
Central data facility extension	2,658	*	*	*	2,658	*	*						
Technical services facility	2,240	*	*	*	2,240	*	*						
Flight crew operations facility	1,764	*	*	*	1,764	*	*						
Cafeteria	706	*	*	*	706	*	*						
Central heating and cooling plant and warehouse ext.	1,625	*	*	*	1,625	*	*						
MARSHALL SPACE FLIGHT CENTER	(15,288)	(-1,529)	(13,759)	(+1,529)	(15,288)	(14,523.5)	(14,523.5)						
Extensions to Saturn V ground support equip- ment test facility	2,495	*	*	*	2,495	*	*						
Cold flow test facility	2,368	*	*	*	2,368	*	*						
Extension of components test facility													
instrumentation	1,814	*	*	*	1,814	*	*						
Extension to the propulsion and vehicle engineering lab.	2,230	*	*	*	2,230	*	*						

*Undistributed.

GPO 862-741

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

Chronological History of the FY 1965 Budget Submission
(In thousands of dollars)

Page 8 of 19

I T E M	A U T H O R I Z A T I O N							A P P R O P R I A T I O N					
	NASA Budget Submission	House Comm. Action (HR 10456) (Rep 1240) (3/18/64)	House and House Comm. Approved Budget (3/25/64)	NASA Reclama Action (4/3/64)	NASA Revised Budget (4/3/64)	Senate Comm. Appd 6/2/64 Senate Appd (6/24/64)	Conf. Comm. Appd 7/11/64 auth. per FL 88-369 (7/11/64)	House Comm. Approved (5/18/64)	House Approved (5/21/64)	Senate and Senate Comm. Approved (7/30/64) (8/5/64)	Conf. Comm. Appd. 8/12/64 Auth. per PL 88-507 (8/30/64)		
Extension of utility systems	3,175	*	*	*	3,175	*	*						
Saturn support test area	3,206	*	*	*	3,206	*	*						
MICHOUD PLANT	(6,534)	(-653)	(5,881)	(+653)	(6,534)	(6,207.5)	(6,207.5)						
Facility additions, extensions and alterations to support Saturn S-IB and S-IC production	2,735	*	*	*	2,735	*	*						
Alterations to Saturn 1st Stage production facilities	628	*	*	*	628	*	*						
Central computer facility extensions & alterations	1,160	*	*	*	1,160	*	*						
Utility extension, alteration and rehabilitation to support Saturn S-IB and S-IC production	2,011	*	*	*	2,011	*	*						
MISSISSIPPI TEST FACILITY	(61,991)	(-6,199)	(55,792)	(+6,199)	(61,991)	(58,891.5)	(58,891.5)						
Additional utility installations and support facilities	9,533	*	*	*	9,533	*	*						
Components service facilities	5,499	*	*	*	5,499	*	*						
Saturn V 1st Stage (S-IC) static test facility	26,384	*	*	*	26,384	*	*						
Saturn V 2nd Stage (S-II) static test facilities	20,575	*	*	*	20,575	*	*						
VARIOUS LOCATIONS	(37,597)	(-5,235)	(32,362)	(+4,935)	(37,297)	(35,352.5)	(35,352.5)						
Facilities for F-1 engine program	2,707	*	*	*	2,707	*	*						
Facilities for J-2 engine program	10,971	*	*	*	10,971	*	*						
Facilities for S-II stage program	2,024	*	*	*	2,024	*	*						
Facilities for S-IVB stage program	10,709	*	*	*	10,709	*	*						
Facilities for M-1 engine program	3,970	-198	3,772	+198	3,970	3,772	3,772						
Addition to space radiation effects lab. for added capabilities	1,876	-94	1,782	+94	1,876	1,782	1,782						

GPC 862-741

*Undistributed.

X24146

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
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Apollo network ground stations - New stations	(4,010)	(-1,772)	(1,938)	(+1,772)	(3,710)	(3,608)	(3,608)						
Cape Kennedy	300 ^{1/}	-300 ^{1/}	---	---	---	---	---						
Northwest Pacific	1,680	-1,670	---	+1,670	1,670	1,670	1,670						
Ascension Island	2,040	-102	1,938	+102	2,040	1,938	1,938						
Apollo network ground stations - additions to existing stations	1,330	-230	1,100	+230	1,330	1,100	1,100						
WALLOPS STATION	(1,804)	(-55)	(1,749)	(+55)	(1,804)	(1,749)	(1,749)						
Launch area modification	684	-55	629	+55	684	629	629						
Support facilities	1,120	---	1,120	---	1,120	1,120	1,120						
FACILITY PLANNING AND DESIGN	(15,000)	(-5,000)	(10,000)	(+5,000)	(15,000)	(10,000)	(10,000)						
Administrative Operations Appropriation	641,000	-23,474.5	617,525.5	+23,474.5	641,000	629,262.7 ^{2/}	623,525.5	610,000		623,525.5	623,525.5		
ALL CENTERS:													
Personnel compensation	326,782	-12,708.5	314,073.5	+12,708.5	326,782	*	*						
Personnel benefits	22,718	-871.0	21,847.0	+871.0	22,718	*	*						
Travel and transportation of persons	22,000	-757.1	21,242.9	+757.1	22,000	*	*						
Transportation of things	5,848	-180.3	5,667.7	+180.3	5,848	*	*						
Rent, Communications, and utilities	47,489	-1,772.1	45,716.9	+1,772.1	47,489	*	*						
Printing and reproduction	5,946	-164.6	5,781.4	+164.6	5,946	*	*						
Other services	82,913	-2,626.9	80,286.1	+2,626.9	82,913	*	*						
Supplies and materials	31,109	-1,358.2	29,750.8	+1,358.2	31,109	*	*						
Equipment	90,074	-2,698.1	87,375.9	+2,698.1	90,074	*	*						
Lands and structures	6,110	-337.5	5,772.5	+337.5	6,110	*	*						
Insurance claims and indemnities	11	.2	10.8	+.2	11	*	*						
TOTAL APPROPRIATIONS:													
Research & Development	4,382,000	-54,050	4,327,950.0	+58,050.0	4,386,000	4,354,150	4,341,100	4,345,000		4,413,594	4,363,594		
Construction of Facilities	281,000	-32,665	248,335.0	+33,665.0	282,000	262,880.5	262,880.5	245,000		262,880.5	262,880.5		
Administrative Operations	641,000	-23,474.5	617,525.5	+23,474.5	641,000	629,262.7	623,525.5	610,000		623,525.5	623,525.5		
GRAND TOTAL	5,304,000	-110,189.5	5,193,810.5	+115,189.5	5,309,000	5,246,293.2	5,227,506	5,200,000		5,300,000	5,250,000		

^{1/}The \$300,000 for KSC Station was reduced by \$15,000 and the balance of \$285,000 transferred to KSC.

^{2/}See Senate Authorization Committee Comments.

*Undistributed.

HOUSE AUTHORIZATION COMMITTEE (REPORT NO. 1240)

RESEARCH AND DEVELOPMENT

Solar observatories. The committee sees no reason for launching the last two or three planned OSO's when it appears that the AOSO will be available in approximately the same time frame. Furthermore, there appears to be no sound justification for having more than one OSO in orbit at any given time. Accordingly, the committee desires that NASA revise its OSO launch schedule to provide for one launch per year. This would appear to eliminate the need for the last three OSO spacecraft in view of the scheduled availability of the AOSO....Furthermore, the committee desires that NASA defer any action on these three spacecraft, at least until future year presentations. In the interim, additional information from OSO II and the progress of the AOSO can be evaluated. (Ref. page 83).

Astronomical observatories. ...While recognizing the interest of the scientific community in astronomical research, it is difficult to understand why a program devoted to the observation of relatively fixed phenomena, such as the stars, nebulae, interstellar matter, and the planets must be conducted on a basis of urgency. Prior to proceeding at the pace now contemplated by NASA, the committee would be interested in reviewing the results of the data obtained from the first OAO launch to determine the extent of additional information required from this type of spacecraft. Furthermore, the committee questions the desirability of providing funds for activities which will not take place until 5 or 6 years after funds have been requested....The committee desires that NASA defer any action on the last two OAO's of the five planned, at least until future year presentations. (Ref. page 83).

Geophysical observatories. ...the committee desires that NASA adopt a launch schedule providing for one OGO per year following the launches in 1964 and 1965. Such a schedule would mean that the last three planned OGO's would not occur until 1969-71. The committee considers it unrealistic to provide funds for activities which will not take place until 6 to 8 years from the date that funds are requested....Furthermore, the committee desires that NASA defer any action on these three spacecraft, at least until future year presentations at which time a more meaningful evaluation can be made on future requirements, based on the performance of the first OGO launches. (Ref. page 84).

Surveyor-Lander. The committee seriously questions the wisdom of acquiring the last two 2,100-pound spacecraft in view of their severely limited payload capability. In addition, NASA's plans to launch nine of these spacecraft, as well as many others of different types, in less than 2 years, appears to be

overly ambitious in the light of NASA's launch experience in the past, and the fact that these flights are dependent upon the availability of the Centaur launch vehicle, now under development. Measured against earlier launch experience, the committee has little confidence that the last two 2,100-pound Surveyor spacecraft will, in fact, be launched prior to the scheduled availability of the "floxed" Atlas-Centaur vehicle and the resultant launching of 2,500-pound Surveyor spacecraft....In addition, the committee desires that NASA defer any action with respect to the two spacecraft in question, at least until future year presentations. (Ref. page 84).

Lunar Orbiter. ...The fiscal year 1965 request includes \$5 million for initial funding of the second series of five spacecraft. This action appears premature both from the early status of negotiations for the first five spacecraft as well as from the fact that we are 2½ years away from the first proposed launch of the first five spacecraft. Moreover, the need for an additional five spacecraft appears questionable in the light of the objectives programmed for the Ranger and the Surveyor-lander launches. ...In addition, the committee desires that NASA defer any action with respect to the second five spacecraft, at least until future year presentations. (Ref. page 85).

Communications Satellites, Supporting Research and Technology. ...it would appear that the primary responsibility for studies bearing on economic matters should rest with the Federal Communications Commission and the Communications Satellite Corp....The committee desires that NASA undertake research activities only in those areas which clearly fall within its area of responsibility and allow other Government agencies or private organizations to perform or underwrite those activities that should fall within their areas of responsibility. (Ref. page 85).

Nuclear rockets program. The committee, therefore, stipulated that \$1,500,000 of the funds authorized for this program be added to the amount already planned for studies on this promising reactor concept. (Ref. page 54).

Aeronautics. Although the committee approved the NASA request of \$37 million for the aeronautics program, the distribution of funds within the program was stipulated. The authorization for aircraft operating problems was increased from \$2,510,000 to \$4,510,000 for the expressed purpose of accelerating the NASA effort to reduce aircraft noise. The funds originally requested for noise studies as well as the stipulated increased funding in this area are authorized for this purpose only, and may not be applied to other portions of the aeronautics program. (Ref. page 86).

ADMINISTRATIVE OPERATIONS

...It was the considered judgment of the committee that an overall reduction of funds for administrative operations in manned space flight and advanced research and technology would be the most effective way of creating in NASA a sense of strict control of fund allocation, while at the same time permitting sufficient flexibility to meet day-to-day changes in program management that might occur.

The reduction in manned space flight was 5 percent of the amount requested, which is a reduction of \$15,228,500. The balance of the overall reduction, or \$8,246,000, is applied to advanced research and technology.

The only specific reduction was in the area of advanced research and technology. The committee eliminated a land structures request totaling \$96,000 for warehouse construction at the Langley Research Center. (Ref. page 90).

COMMITTEE VIEWS

Cooperation in Use of Facilities. ...The committee wishes to emphasize that, insofar as possible, the equipment and facilities authorized for the tracking network must serve all users to the maximum feasible extent. The placement of tracking stations should include consideration of the future space network requirements of DOD as well as NASA. The tracking net is an expensive and very necessary segment of the Nation's space capability, and every effort should be made to insure that investments made to upgrade existing stations, as well as create new stations, are accomplished in such a way as to produce the best possible return to both DOD and NASA. (Ref. page 91).

Aircraft Noise. The committee believes that more emphasis must be placed on efforts to reduce noise generated by aircraft on the ground and in low altitude flight in the vicinity of airports. NASA programs have produced some improvements, particularly the development of the jet exhaust noise suppressors now in use on commercial jet airliners. Studies to discover other promising means of reducing aircraft noise are included in the planned program for fiscal year 1965. The committee notes that the limiting criteria for noise generation by the supersonic transport (i.e., no more than current jet transports) will not alleviate the existing unsatisfactory situation, and desires that improved

methods be sought for use on the supersonic transport and on existing jet and propeller driven aircraft. The committee desires that NASA initiate a vigorous program in this field and report to the committee not later than January 15, 1965, of its plan of action. The committee stipulates that an additional \$2,000,000 within this authorization be added to the planned noise reduction work and that these total moneys be used exclusively for this work. NASA should also work with the Federal Aviation Agency to refine their standards for acceptable aircraft noise levels. (Ref. page 91).

Use of Authorized Funds. A review of previous launch schedules of the Office of Space Sciences and Applications for the past three years, indicates that the funds requested for launch vehicles have been consistently overestimated by a substantial margin varying from 30 to 50 percent more than the amount of funds actually required during each of those years.

Witnesses testified to the effect that funds requested for the purchase of launch vehicles which, during the following fiscal year, have not been spent for this purpose reflect delays experienced in the various spacecraft development projects. These delays in flight programs have resulted in a correspondingly reduced need for launch vehicles to support such programs. Funds thereby not needed for the purchase of launch vehicles have become available for, and have been applied to, the various spacecraft development programs, which generally have cost substantially more than originally predicted.

The Committee recognizes that NASA cannot be expected to anticipate all the problems and difficulties associated with spacecraft development projects, and the corresponding delays in launch schedules; nor to predict with unerring accuracy costs which will be incurred in complex R. & D. projects. Yet those variables are not acceptable as an excuse for the practice of requesting large amounts of money from Congress for one purpose, year after year, and then using such funds for another purpose. Congress must know, to the extent possible, the purposes for which public funds are authorized and appropriated.

Therefore, the Committee calls attention to past wide disparities between funds requested for the purchase of launch vehicles and the amounts actually spent for this purpose; and NASA is hereby on notice that, in the future, the Committee will expect more realistic launch schedules and insist that corresponding requests for funds for the purchase of launch vehicles should reflect actual requirements more accurately than in the past. If additional funds should be needed for spacecraft development, or other purposes, NASA should request authorization and appropriations for those specific purposes, and not rely upon surpluses in the launch vehicle account, or other accounts. (Ref. page 91 & 92).

Gaseous Core Reactor Research. The potential of nuclear propulsion and the future need for higher specific impulse rocket engines was emphasized to the Committee during the hearings on this bill. One of the most promising techniques presented is the gaseous core reactor research that has the advantage of providing higher specific impulse without the disadvantages of some of the other nuclear propulsion methods. In view of this potential, the Committee desires that NASA increase their efforts in developing this promising technique. Accordingly, the Committee desires that NASA increase the funds currently programmed for gaseous core reactor research by \$1,500,000. These funds are to be made available from within the \$57,000,000 approved for the nuclear rocket program. (Ref. page 92).

Additional Regional Operations Offices. At the present time NASA is operating with two regional operations offices, one located in the Los Angeles area, and the second, the Northeast office, located in Boston. It is the sense of the committee that a study to analyze the need for the establishment of additional regional operations offices in other geographical locations should be made, to assure the full utilization of the scientific community, university and industrial personnel. (Ref. page 92).

SENATE AUTHORIZATION COMMITTEE (REPORT NO. 1054)

SUMMARY

Earmarking of funds. The committee authorized a total of \$4,354,150,000 for research and development. This represented a restoration of \$26,200,000 above the total amount authorized by the House. In granting this restoration the Senate agreed with the House to the \$4 million added by the House to the chemical propulsion program. This \$4 million was not budgeted for originally by the administration. The House action earmarked \$3 million of this add-on for liquid propellants and \$1 million for solid propellants. While the Senate agreed to this add-on, it does not agree to the earmarking of specific funds for these programs (see report language under chemical propulsion program). (Ref. page 3)

Public Facility at Cape Kennedy. Some of this represents a total restoration of individual items, in some cases it represents a partial restoration of House cuts, in one case it represents the elimination of an item recommended by the House, but not in the original administration budget (public facilities at Cape Kennedy). (Ref. page 3)

RESEARCH AND DEVELOPMENT

Launch Vehicle Development. The committee, however, recognizes the fact that at some time in the not too distant future the Nation must make a determination in connection with standardizing on standard launch vehicles which will be utilized both by NASA and the military to carry out our national space program. The committee further recognizes that NASA is nearing two milestones in its flexing program for the Atlas-Centaur: (1) Relating to the construction of a test stand to carry out engine tests which is in the timetable of July-August of this year, and (2) relating to contracting for its first vehicle which would require ordering the vehicle during the first quarter of calendar year 1965 for use in the third quarter of 1966.

The committee, therefore, intends during June of this calendar year to hold extensive hearings in order to review the entire launch vehicle program for space activities. The committee will hear witnesses both from our civilian space agency and the military in order to determine whether or not a final decision can be made which would result in the standardization of basic booster vehicles to be utilized both by NASA and the military in their space program. (Ref. page 24)

Nuclear Rockets Program. The committee questions, however, the advisability of stipulating that an additional \$1,500,000 be earmarked specifically for studies in these concepts, particularly when money in the nuclear rocket program is being reduced. The Senate committee therefore recommends that NASA place more studies on gaseous core reactors and that not to exceed \$1,500,000 over and above the amount already planned for these studies may be utilized for this purpose, but that the total amount utilized by NASA should be determined on the basis of how much NASA can intelligently spend in carrying out these programs and advancing the state of the art. (Ref. page 31)

Chemical Propulsion. The committee has noted this request and approves of the funding of this amount for this project. The committee also understands that at the present time there are two contractors working on the 260-inch motor program and that there are no funds requested beyond the \$13 million requested to finish the phase I feasibility demonstration.

It would be unfortunate if phase I resulted in an outstanding success; a decision was made to go into phase II and then the agency found that there was not adequate funding to accomplish an orderly transition. It is therefore requested that prior to March 15, 1965, NASA report to Congress on this program outlining its decision whether or not it will enter into phase II of the program and indicating whether sufficient funds are available to provide for an orderly transition into phase II.

The committee agrees to the additional amount added on by the House committee for chemical propulsion. However, the committee feels that too fine a line of definition was made in earmarking \$3 million additional specifically for liquid propellants and \$1 million additional specifically for solid propellants. The committee, therefore, recommends that the additional \$4 million be lumped together and identified as additional funds for chemical propulsion research (which would apply both to liquid and solid propellants), leaving it to the discretion of NASA to determine the proper proportion of these funds into those areas which appear to be the most promising. The total amount of funding would remain the same as approved by the House, \$62,800,000. (Ref. pages 32 & 33)

Aeronautics. The committee, therefore, recognizing that this is an important research program involving a very real problem affecting the welfare of many U.S. citizens and their property, recommends that NASA, in addition to spending the approximate half million dollars for noise research of a general nature and another half million dollars budgeted under supersonic transport research, which research is directly applicable to noise abatement of present aircraft engines, utilize an additional \$400,000 of the total amount budgeted for aeronautical research for an extensive aircraft noise reduction program. (Ref. page 34)

CONSTRUCTION OF FACILITIES

Kennedy Space Center (Public Facilities Installation). The public facilities installation added by the House for which \$1 million was allocated, was not budgeted for by the administration and your committee has not had any justification submitted to it at the present time for such facility. Your committee therefore recommends that NASA study the need for and character of such a facility. If the determination is made by NASA that such a facility is required, the funding for its construction shall be accomplished within the funds made available as a result of your committee's action in restoring \$3,476,000 of the total amount cut by the House at Cape Kennedy.

At various locations a request for a network ground station for the Apollo program was rejected by the House as deferrable for at least 1 year without detriment to the program. The House also pointed out that while this proposed station was slated for the Northwest Pacific no site had been selected. More recent testimony from NASA revealed that a site has now been selected (Guam), and further convinced your committee that it is necessary to start construction now if the station is to be operational at the time it is needed. (Ref. page 38)

Manned Space Flight Facilities. The manned space flight construction of facilities total program was reduced 5 percent (\$11,245,500) with the understanding that no specific project was denied authorization. The intent is to provide flexibility to NASA in applying the reduction to the various construction projects. Therefore, individual project requests have not been reduced on a pro rata basis. (Ref. page 48, 49, 50, 51, & 52)

ADMINISTRATIVE OPERATIONS

In examining the proposed staffing levels of NASA for fiscal year 1965, it appears that insufficient employment planning and recruitment time was allowed resulting in overly optimistic on-board projection dates (and overstatement of fund requirements) for the additional personnel to be employed during the year. Therefore, a fund reduction is in order to offset the unrealistic employment lapse computation. In addition, a review of certain organizational elements indicated that the request for the Office of Legislative Affairs and the Office of Public Affairs is not justified.

Accordingly, your committee is of the opinion that the cut in administrative operations should be limited to approximately 1.83 percent or \$11,737,250. In absorbing this cut the committee directs that a 5 percent reduction in the amounts budgeted by NASA for the Office of Legislative Affairs and the Office of Public Affairs be made. With respect to the remainder of the reduction in administrative operations funds, the allocation should be dictated by management review of the several expense categories comprising administrative operations. The committee took note, however, of the extensive testimony by NASA concerning the economic advantages that would accrue from the purchase rather than lease of computer equipment, and therefore suggests that in apportioning the reduction NASA should not reduce its ability to procure this equipment to the maximum extent that economic studies indicate.

The committee intends to perform reviews of NASA administrative operations during fiscal year 1965, which reviews will include NASA policies with respect to the allocation of its budget reduction. (Ref. page 55)

CONFERENCE REPORT NO. 1529

CONSTRUCTION OF FACILITIES

Public Facilities Center at Cape Kennedy - The Conferees recognized the need for public facilities at the John F. Kennedy Space Center. It is the sense of the conferees that the restored funds will allow start of construction of the necessary public facilities. (Ref. page 5).

HOUSE APPROPRIATION COMMITTEE (HR 11296)

The House Committee by HR 11296 of May 18, 1964 reduced the requirement for motor vehicles from 114 to 67 of which 34 are for replacement only. (Ref. page 45)

SENATE APPROPRIATION COMMITTEE (REPORT 1269)

The Senate Committee by Report 1269 of July 31, 1964 reduced the number of vehicles to be purchased to 85 of which 40 are for replacement. (Ref. page 19)

CONFERENCE COMMITTEE (REPORT 1781)

ADMINISTRATIVE OPERATIONS

Amendment No. 207 inserts language proposed by the Senate relating to transfer of funds and funds available to the Administrator amended to delete emergency expense.

APPROPRIATIONS BILL (PL 88-507)

ADMINISTRATIVE OPERATIONS

Authorizes the purchase or hire of not to exceed two aircraft for administrative use, and purchase and hire of motor vehicles (including purchase of not to exceed eighty-five passenger motor vehicles, of which forty shall be for replacement only). (Ref. page 18).