

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION



CHRONOLOGICAL HISTORY  
FISCAL YEAR 1970  
BUDGET SUBMISSION

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

Final 12/5/69

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(Note: Legislative documents reproduced herein are not complete in all cases. For complete text refer to the document itself.)

# NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

Chronological History of the FY 1970 Budget Submission  
(In thousands of dollars)

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 Initial Budget Submission	NASA Amended Budget Submission	House Comm Approved HR 11271 Rep No 91-255 5/19/69	House Approved 6/10/69	Senate Comm Approved HR 11271 Rep No 91-282 6/26/69	Senate Approved 9/19/69	Conf Comm Appd 11/6/69 Rep No 91-60 P.L. 91-119 11/18/69	House Comm Approved HR 12307 Rep No 91-316 6/19/69	House Approved 6/24/69	Senate Comm Approved Rep No 91-521 11/6/69	Senate Approved 11/12/69	Conf Comm Appd 11/17/69 Rep No 91-649 P.L. 91-126 11/26/69
<b>TOTAL APPROPRIATIONS:</b>												
Research & Development..	3,051,427 <sup>1/</sup>	3,006,427	3,264,427	3,264,427	3,019,927	3,019,927	3,019,927	3,000,000	3,000,000	3,019,927	3,019,927	3,006,000
Construction of Facilities.....	58,200	58,200	58,200	58,200	58,200	58,200	58,200	53,233	53,233	58,200	58,200	53,233
Research & Program Management.....	650,900	650,900	643,750	643,750	637,400	637,400	637,400	643,750	643,750	637,400	637,400	637,400
<b>GRAND TOTAL.....</b>	<b>3,760,527<sup>1/</sup></b>	<b>3,715,527</b>	<b>3,966,377</b>	<b>3,966,377</b>	<b>3,715,527</b>	<b>3,715,527</b>	<b>3,715,527</b>	<b>3,696,983</b>	<b>3,696,983</b>	<b>3,715,527</b>	<b>3,715,527</b>	<b>3,696,633</b>
<b>R&amp;D Appropriation:</b>												
OMSP.....	1,890,227 <sup>1/</sup>	1,919,227	2,124,127	2,124,127	1,919,227	1,919,227	1,919,227					
OSSA.....	558,800	517,800	524,400	524,400	517,800	517,800	517,800					
OUA.....	9,000	9,000	9,000	9,000	9,000	9,000	9,000					
OART.....	290,400	277,400	308,900	308,900	290,900	290,900	290,900					
OTDA.....	298,000	278,000	293,000	293,000	278,000	278,000	278,000					
OTU.....	5,000	5,000	5,000	5,000	5,000	5,000	5,000					
<b>TOTAL R&amp;D.....</b>	<b>3,051,427<sup>1/</sup></b>	<b>3,006,427</b>	<b>3,264,427</b>	<b>3,264,427</b>	<b>3,019,927</b>	<b>3,019,927</b>	<b>3,019,927</b>	<b>3,000,000</b>	<b>3,000,000</b>	<b>3,019,927</b>	<b>3,019,927</b>	<b>3,006,000</b>
<b>CoF Appropriation:</b>												
OMSP.....	14,250	14,250	14,250	14,250	14,250	14,250	14,250					
OSSA.....	1,595	1,595	1,595	1,595	1,595	1,595	1,595					
OART.....	12,855	12,855	12,855	12,855	12,855	12,855	12,855					
OTDA.....	17,000	17,000	17,000	17,000	17,000	17,000	17,000					
O&M.....	9,000	9,000	9,000	9,000	9,000	9,000	9,000					
Fac. Plan'g and Design..	3,500	3,500	3,500	3,500	3,500	3,500	3,500					
<b>TOTAL CoF.....</b>	<b>58,200</b>	<b>58,200</b>	<b>58,200</b>	<b>58,200</b>	<b>58,200</b>	<b>58,200</b>	<b>58,200</b>	<b>53,233</b>	<b>53,233</b>	<b>58,200</b>	<b>58,200</b>	<b>53,233</b>
<b>RPM Appropriation:</b>												
OMSP.....	307,450	307,450	304,000	304,000	*	•	*					
OSSA.....	88,053	88,053	88,053	88,053	*	*	*					
OART.....	195,600	195,600	193,900	193,900	*	*	*					
Supporting Operations...	59,797	59,797	57,797	57,797	*	*	*					
<b>TOTAL RPM.....</b>	<b>650,900</b>	<b>650,900</b>	<b>643,750</b>	<b>643,750</b>	<b>637,400</b>	<b>637,400</b>	<b>637,400</b>	<b>643,750</b>	<b>643,750</b>	<b>637,400</b>	<b>637,400</b>	<b>637,400</b>
<b>TOTAL NASA.....</b>	<b>3,760,527<sup>1/</sup></b>	<b>3,715,527</b>	<b>3,966,377</b>	<b>3,966,377</b>	<b>3,715,527</b>	<b>3,715,527</b>	<b>3,715,527</b>	<b>3,696,983</b>	<b>3,696,983</b>	<b>3,715,527</b>	<b>3,715,527</b>	<b>3,696,633</b>

<sup>1/</sup> Excludes application of \$117,473,000 which had been reserved from apportionment pursuant to the Expenditure Control Act of 1968 (P.L. 90-364, 82 Stat. 251).

• Undistributed.

## NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

Chronological History of the FY 1970 Budget Submission  
(In thousands of dollars)

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:	3,051,427	3,006,427	3,264,427	3,264,427	3,019,927	3,019,927	3,019,927	3,000,000	3,000,000	3,019,927	3,019,927	3,006,000
OFFICE OF MANNED SPACE												
FLIGHT.....	1,890,227 <sup>1/</sup>	1,919,227	2,124,127	2,124,127	1,919,227	1,919,227	1,919,227					
Apollo Program.....	(1,651,100)	(1,691,100)	(1,766,800)	(1,766,800)	(1,691,100)	(1,691,100)	(1,691,100)					
Spacecraft.....	653,800	653,800	653,800	653,800	653,800	653,800	653,800					
Saturn V.....	496,700	496,700	528,800	528,800	496,700	496,700	496,700					
Lunar exploration.....	11,000	90,000	94,600	94,600	90,000	90,000	90,000					
Operations.....	489,600	450,600	489,600	489,600	450,600	450,600	450,600					
Space Flight Operations Program.....	(236,627) <sup>1/</sup>	(225,627)	(354,827)	(354,827)	(225,627)	(225,627)	(225,627)					
Apollo applications.....	308,800	251,800	308,800	308,800	251,800	251,800	251,800					
Space station.....	9,000	9,000	75,000	75,000	9,000	9,000	9,000					
Saturn V production.....	---	46,000	52,200	52,200	46,000	46,000	46,000					
Operations.....	36,300	36,300	36,300	36,300	36,300	36,300	36,300					
FY 1969 funds applied...	-117,473	-117,473	-117,473	-117,473	-117,473	-117,473	-117,473					
Advanced Missions Program	(2,500)	(2,500)	(2,500)	(2,500)	(2,500)	(2,500)	(2,500)					
Adv. missions studies...	2,500	2,500	2,500	2,500	2,500	2,500	2,500					
OFFICE OF SPACE SCIENCE AND APPLICATIONS.....	558,800	517,800	524,400	524,400	517,800	517,800	517,800					
Physics and Astronomy Program.....	(119,600)	(117,600)	(112,600)	(112,600)	(117,600)	(117,600)	(117,600)					
SR&T/Adv. studies.....	19,600	19,600	16,600	16,600	19,600	19,600	19,600					
Data analysis.....	3,700	3,700	3,700	3,700	3,700	3,700	3,700					
Sounding rockets.....	20,100	20,100	20,100	20,100	20,100	20,100	20,100					
Solar observatories.....	14,800	14,800	14,800	14,800	14,800	14,800	14,800					
Astronomical observatories.....	28,600	28,600	28,600	28,600	28,600	28,600	28,600					
Geophysical observatories	6,800	6,800	6,800	6,800	6,800	6,800	6,800					
Explorers.....	26,000	24,000	22,000	22,000	24,000	24,000	24,000					
Lunar and Planetary Exploration Program.....	(146,800)	(138,800)	(131,800)	(131,800)	(138,800)	(138,800)	(138,800)					
SR&T/Adv. studies.....	24,600	24,600	20,600	20,600	24,600	24,600	24,600					
Data analysis.....	2,700	2,700	2,700	2,700	2,700	2,700	2,700					
Pioneer.....	18,200	18,200	18,200	18,200	18,200	18,200	18,200					
Mariner-Mars 1969.....	4,900	4,900	4,900	4,900	4,900	4,900	4,900					
Mariner-Mars 1971.....	45,400	45,400	45,400	45,400	45,400	45,400	45,400					
Mariner-Mercury 1973....	3,000	3,000	---	---	3,000	3,000	3,000					
Viking.....	40,000	40,000	40,000	40,000	40,000	40,000	40,000					
Planetary explorers.....	8,000	---	---	---	---	---	---					

<sup>1/</sup> See page 1, footnote 1.

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(in thousands of dollars)

Page 3.

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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Bioscience Program.....	(32,400)	(20,400)	(27,400)	(27,400)	(20,400)	(20,400)	(20,400)					
SR&T/Adv. studies.....	11,400	11,400	6,400	6,400	11,400	11,400	11,400					
Planetary quarantine....	3,000	3,000	3,000	3,000	3,000	3,000	3,000					
Biosatellite.....	18,000	6,000	18,000	18,000	6,000	6,000	6,000					
Space Applications Program	(135,800)	(128,400)	(138,400)	(138,400)	(128,400)	(128,400)	(128,400)					
SRT/Adv. studies.....	22,400	22,400	22,400	22,400	22,400	22,400	22,400					
TIROS/TOS improvements..	5,200	3,700	3,700	3,700	3,700	3,700	3,700					
Nimbus.....	29,200	27,800	27,800	27,800	27,800	27,800	27,800					
Synchronous meteor- ological satellite....	3,600	3,600	3,600	3,600	3,600	3,600	3,600					
Meteorological soundings	3,000	3,000	3,000	3,000	3,000	3,000	3,000					
Cooperative applications satellites.....	100	100	100	100	100	100	100					
Applications technology satellites.....	44,200	41,000	41,000	41,000	41,000	41,000	41,000					
Geodetic satellites.....	3,000	1,700	1,700	1,700	1,700	1,700	1,700					
Earth resources survey..	25,100	25,100	35,100	35,100	25,100	25,100	25,100					
Aircraft program.....	(11,000)	(11,000)	(11,000)	(11,000)	(11,000)	(11,000)	(11,000)					
Earth resources technology satellite	(14,100)	(14,100)	(24,100) <sup>1/</sup>	(24,100) <sup>1/</sup>	(14,100)	(14,100)	(14,100)					
Launch Vehicle Procurement Program.....	(124,200)	(112,600)	(114,200)	(114,200)	(112,600)	(112,600)	(112,600)					
SR&T/Adv. studies.....	4,000	4,000	4,000	4,000	4,000	4,000	4,000					
Scout.....	15,700	11,700	11,700	11,700	11,700	11,700	11,700					
Delta.....	33,700	32,100	33,700	33,700	32,100	32,100	32,100					
Agena.....	7,300	6,300	6,300	6,300	6,300	6,300	6,300					
Centaur.....	57,600	52,600	52,600	52,600	52,600	52,600	52,600					
Titan III C.....	5,900	5,900	5,900	5,900	5,900	5,900	5,900					
<b>OFFICE OF UNIVERSITY AFFAIRS.....</b>	9,000	9,000	9,000	9,000	9,000	9,000	9,000					
Sustaining University Program.....	(9,000)	(9,000)	(9,000)	(9,000)	(9,000)	(9,000)	(9,000)					
Research.....	5,000	5,000	5,000	5,000	5,000	5,000	5,000					
Administration and management.....	1,500	1,500	1,500	1,500	1,500	1,500	1,500					
Engineering systems design.....	1,000	1,000	1,000	1,000	1,000	1,000	1,000					
Special training.....	1,500	1,500	1,500	1,500	1,500	1,500	1,500					

<sup>1/</sup> To be used for this project only.

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

Chronological History of the FY 1970 Budget Submission  
(In thousands of dollars)

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<b>OFFICE OF ADVANCED RESEARCH AND TECHNOLOGY.....</b>	290,400	277,400	308,900	308,900	290,900	290,900	290,900					
Basic Research Program....	(21,400)	(20,250)	(21,400)	(21,400)	(20,250)	(20,250)	(20,250)					
SR&T.....	21,400	20,250	21,400	21,400	20,250	20,250	20,250					
Space Vehicle Systems Program.....	(30,000)	(27,500)	(30,000)	(30,000)	(27,500)	(27,500)	(27,500)					
Research and Technology:												
Space vehicle aero- thermodynamics.....	8,545	7,545	8,545	8,545	7,545	7,545	7,545					
Space vehicle structures.....	8,980	8,830	8,980	8,980	8,830	8,830	8,830					
Space environmental protection & control	9,105	8,455	9,105	9,105	8,455	8,455	8,455					
Space vehicle design criteria.....	1,570	1,470	1,570	1,570	1,470	1,470	1,470					
Aerospace safety research.....	1,800	1,200	1,800	1,800	1,200	1,200	1,200					
Electronics Systems Program.....	(35,000)	(33,550)	(35,000)	(35,000)	(33,550)	(33,550)	(33,550)					
SR&T.....	35,000	33,550	35,000	35,000	33,550	33,550	33,550					
Human Factor Systems Program.....	(23,600)	(22,100)	(23,600)	(23,600)	(22,100)	(22,100)	(22,100)					
SR&T.....	21,600	20,100	21,600	21,600	20,100	20,100	20,100					
Biotechnology flight projects.....	2,000	2,000	2,000	2,000	2,000	2,000	2,000					
Space Power & Electric Propulsion Systems Program.....	(39,900)	(36,950)	(39,900)	(39,900)	(36,950)	(36,950)	(36,950)					
SR&T.....	39,400	36,450	39,400	39,400	36,450	36,450	36,450					
SNAP-8 technology.....	(5,000) <sup>1/</sup>	(5,000) <sup>1/</sup>	(5,000) <sup>1/</sup>	(5,000) <sup>1/</sup>	(5,000) <sup>1/</sup>	(5,000) <sup>1/</sup>	(5,000) <sup>1/</sup>					
Space electric rocket test (SERT).....	500	500	500	500	500	500	500					
Nuclear Rockets Program...	(36,500)	(36,500)	(50,000) <sup>2/</sup>	(50,000) <sup>2/</sup>	(50,000)	(50,000)	(50,000)					
SR&T.....	8,000	8,000	9,500	9,500	9,500	9,500	9,500					
NERVA.....	27,500	27,500	39,000	39,000	39,000	39,000	39,000					
NRDS operations.....	1,000	1,000	1,500	1,500	1,500	1,500	1,500					
Chemical Propulsion Program.....	(25,100)	(22,850)	(28,100)	(28,100)	(22,850)	(22,850)	(22,850)					
SR&T.....	25,100	22,850	25,100	25,100	22,850	22,850	22,850					
Large solid motor proj...	---	---	3,000 <sup>3/</sup>	3,000 <sup>3/</sup>	---	---	---					

1/ Included in SR&T.  
2/ To be used only for Nuclear Rockets program.  
3/ Funds authorized for this project are to be used only for the 260-inch large solid motor project.

Prepared by:  
Office of Administration  
Budget Operations Div.  
Code BT-1 Ext. 24146

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<b>Aeronautical Vehicles</b>												
Program.....	(78,900)	(77,700)	(80,900)	(80,900)	(77,700)	(77,700)	(77,700)					
Advanced research	21,785	21,785	*	*	21,785	21,785	21,785					
General aviation aircraft technology.....	500	500	*	*	500	500	500					
V/STOL aircraft technology.....	11,250	10,850	•	*	10,850	10,850	10,850					
Subsonic aircraft technology.....	16,190	16,190	*	*	16,190	16,190	16,190					
Supersonic aircraft technology.....	20,900	20,900	*	*	20,900	20,900	20,900					
Hypersonic aircraft technology.....	8,275	7,475	*	*	7,475	7,475	7,475					
<b>OFFICE OF TRACKING AND DATA ACQUISITION.....</b>	298,000	278,000	293,000	293,000	278,000	278,000	278,000					
<b>Tracking and Data Acquisition Program.....</b>	(298,000)	(278,000)	(293,000)	(293,000)	(278,000)	(278,000)	(278,000)					
Operations.....	239,400	231,400	*	*	231,400	231,400	231,400					
Equipment.....	46,100	34,100	*	*	34,100	34,100	34,100					
SR&T.....	12,500	12,500	•	*	12,500	12,500	12,500					
<b>OFFICE OF TECHNOLOGY UTILIZATION.....</b>	5,000	5,000	5,000	5,000	5,000	5,000	5,000					
<b>Technology Utilization Program.....</b>	(5,000)	(5,000)	(5,000)	(5,000)	(5,000)	(5,000)	(5,000)					
Identification and publication.....	1,700	1,700	1,700	1,700	1,700	1,700	1,700					
Evaluation.....	950	950	950	950	950	950	950					
Dissemination.....	2,350	2,350	2,350	2,350	2,350	2,350	2,350					

\* Undistributed

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Office of Administration  
Budget Operations Div.  
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## NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

Chronological History of the FY 1970 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				
	NASA Initial Budget Submission	NASA Amended Budget Submission	House Comm Approved HR 11271 Rep No 91-255 5/19/69	House Approved 6/10/69	Senate Comm Approved HR 11271 Rep No 91-282 6/26/69	Senate Approved 9/19/69	Conf Comm Appd 11/6/69 Rep No 91-609 P.L. 91-119 11/18/69	House Comm Approved HR 12307 Rep No 91-316 6/19/69	House Approved 6/24/69	Senate Comm Approved Rep No 91-521 11/6/69	Senate Approved 11/12/69	Conf Comm Appd 11/17/69 Rep No 91-649 P.L. 91-126 11/26/69
CONSTRUCTION OF FACILITIES APPROPRIATION:	58,200	58,200	58,200	58,200	58,200	58,200	58,200	53,233	53,233	58,200	58,200	53,233
ELECTRONICS RESEARCH												
CENTER.....	(8,088)	(8,088)	(8,088)	(8,088)	(8,088)	(8,088)	(8,088)					
R-Computer/instrumenta- tion research labora- tory.....	6,962	6,962	6,962	6,962	6,962	6,962	6,962					
R-Center support facil- ities III.....	1,126	1,126	1,126	1,126	1,126	1,126	1,126					
GODDARD SPACE FLIGHT CENTER.....	(670)	(670)	(670)	(670)	(670)	(670)	(670)					
S-Tire protection and prevention modifica- tions.....	670	670	670	670	670	670	670					
KENNEDY SPACE CENTER.....	(12,500)	(12,500)	(12,500)	(12,500)	(12,500)	(12,500)	(12,500)					
M-Launch complexes 34 and 37.....	8,000	8,000	8,000	8,000	8,000	8,000	8,000					
M-Manned spacecraft facilities modifi- cations.....	1,000	1,000	1,000	1,000	1,000	1,000	1,000					
M-Utility installations.	3,300	3,300	3,300	3,300	3,300	3,300	3,300					
M-High pressure gas maintenance facility..	200	200	200	200	200	200	200					
LANGLEY RESEARCH CENTER...	(4,767)	(4,767)	(4,767)	(4,767)	(4,767)	(4,767)	(4,767)					
R-Aircraft noise reduction laboratory..	4,767	4,767	4,767	4,767	4,767	4,767	4,767					
MANNED SPACECRAFT CENTER..	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)	(1,750)					
M-Mission control center power generation facility.....	1,750	1,750	1,750	1,750	1,750	1,750	1,750					
WALLOPS STATION.....	(500)	(500)	(500)	(500)	(500)	(500)	(500)					
S-Flight information control and analysis laboratory.....	500	500	500	500	500	500	500					

M - Manned Space Flight facilities.  
S - Space Science and Applications facilities.  
R - Advanced Research and Technology facilities.  
T - Tracking and Data Acquisition facilities.  
O - Office of Organization and Management project.

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# NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

Chronological History of the FY 1970 Budget Submission  
(in thousands of dollars)

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<b>VARIOUS LOCATIONS.....</b>	(26,425)	(26,425)	(26,425)	(26,425)	(26,425)	(26,425)	(26,425)					
O-Modifications and rehabilitations at all locations.....	9,000	9,000	9,000	9,000	9,000	9,000	9,000					
S-Space launch complex 2, modifications.....	425	425	425	425	425	425	425					
T-Deep space antenna (210 foot) facilities.	17,000	17,000	17,000	17,000	17,000	17,000	17,000					
<b>FACILITY PLANNING AND DESIGN.....</b>	(3,500)	(3,500)	(3,500)	(3,500)	(3,500)	(3,500)	(3,500)					

M - Manned Space Flight facilities.  
S - Space Science and Applications facilities.  
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## NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

Chronological History of the FY 1970 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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<b>RESEARCH AND PROGRAM</b>																				
<b>MANAGEMENT APPROPRIATION:</b>	650,900	650,900	643,750	643,750	637,400	637,400	637,400	643,750	643,750	637,400	637,400	637,400								
<b>BY OBJECT CLASSIFICATION:</b>	650,900	650,900	(643,750)	(643,750)	(637,400)	(637,400)	(637,400)	(643,750)	(643,750)	(637,400)	(637,400)	(637,400)								
Personnel compensation..	433,723	433,723	}	}	}	}	}	}	}	}	}	}								
Personnel benefits.....	32,951	32,951																		
Benefits for former personnel.....	---	---																		
Travel & transportation of persons.....	16,339	16,339																		
Transportation of things	3,987	3,987																		
Rent, Comm. & utilities.	46,963	46,963																		
Printing and reprod....	6,342	6,342																		
Other services.....	90,697	90,697																		
Supplies and materials..	15,768	15,768																		
Equipment.....	2,849	2,849																		
Lands and structures....	1,153	1,153																		
Grants, subsidies and contributions.....	92	92																		
Insurance claims and indemnities.....	36	36																		
<b>BY INSTALLATION:</b>																				
Kennedy Space Center....	97,501	97,501	}	}	}	}	}	}	}	}	}	}								
Manned Spacecraft Ctr...	97,748	97,748																		
Marshall Sp. Flt. Ctr...	112,201	112,201																		
Goddard Sp. Flt. Ctr....	79,024	79,024	79,024	79,024	}	}	}	}	}	}	}	}								
Wallops Station.....	9,029	9,029	9,029	9,029																
Ames Research Center....	34,050	34,050																		
Electronics Res. Ctr....	18,566	18,566																		
Flight Research Ctr....	9,615	9,615	193,900	193,900																
Langley Research Ctr....	63,308	63,308																		
Lewis Research Ctr.....	68,061	68,061																		
Space Nuc. Prop. Ofc....	2,000	2,000																		
NASA Headquarters.....	59,797	59,797	57,797 <sup>1/</sup>	57,797 <sup>1/</sup>																
<b>BY FUNCTION:</b>																				
Personnel.....	469,550	469,550	}	}									}	}	}	}	}	}	}	}
Travel.....	14,600	14,600																		
Automatic data processing.....	23,829	23,829			643,750	643,750														
Facilities services.....	84,954	84,954																		
Technical services.....	16,860	16,860																		
Administrative support..	41,107	41,107																		

<sup>1/</sup> The reduction of \$2,000,000 includes \$1,500,000 to be specifically applied against the funding for the Public Affairs Office. For complete text see Page No. 17.

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91ST CONGRESS } HOUSE OF REPRESENTATIVES { REPORT  
1st Session } { No. 91-255

AUTHORIZING APPROPRIATIONS TO THE NATIONAL  
AERONAUTICS AND SPACE ADMINISTRATION

MAY 19, 1969.—Committed to the Committee of the Whole House on the  
State of the Union and ordered to be printed

Mr. MILLER of California, from the Committee on Science and  
Astronautics, submitted the following

REPORT

[To accompany H.R. 11271]

The Committee on Science and Astronautics, to whom was referred the bill (H.R. 11271) to authorize appropriations to the National Aeronautics and Space Administration for research and development, construction of facilities, and administrative operations, and for other purposes, having considered the same, report favorably thereon without amendment and recommend that the bill do pass.

PURPOSE OF THE BILL

The purpose of the bill is to authorize appropriations to the National Aeronautics and Space Administration for fiscal year 1970, as follows:

Programs	Authorization	Report page No.
Research and development.....	\$3, 264, 427, 000	3
Construction of facilities.....	58, 200, 000	123
Research and program management..	643, 750, 000	135
Total.....	3, 966, 377, 000	

EXPLANATION OF THE BILL

RESEARCH AND DEVELOPMENT

SUMMARY

Programs	Authorization	Report page No.
1. Apollo.....	\$1, 766, 800, 000	5
2. Space flight operations.....	354, 827, 000	17
3. Advanced missions.....	2, 500, 000	24
4. Physics and astronomy.....	112, 600, 000	25
5. Lunar and planetary exploration.....	131, 800, 000	35
6. Bioscience.....	27, 400, 000	45
7. Space applications.....	138, 400, 000	53
8. Launch vehicle procurement.....	114, 200, 000	64
9. Sustaining university program.....	9, 000, 000	69
10. Space vehicle systems.....	30, 000, 000	75
11. Electronics systems.....	35, 000, 000	79
12. Human factor systems.....	23, 600, 000	85
13. Basic research.....	21, 400, 000	89
14. Space power and electric propulsion systems.....	39, 900, 000	92
15. Nuclear rockets.....	50, 000, 000	97
16. Chemical propulsion.....	28, 100, 000	99
17. Aeronautical vehicles.....	80, 900, 000	102
18. Tracking and data acquisition.....	293, 000, 000	111
19. Technology utilization.....	5, 000, 000	120
Total.....	3, 264, 427, 000	

## COMMITTEE RECOMMENDATION

A quorum being present, the bill was favorably reported

## NASA RECOMMENDATIONS

This is a National Aeronautics and Space Administration legislative item approved with the exceptions noted in this report, by the Bureau of the Budget, as indicated by the following letters:

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION,  
Washington, D.C., January 15, 1969.

HON. JOHN MCCORMACK,  
Speaker of the House of Representatives, Washington, D.C.

DEAR MR. SPEAKER: Herewith submitted is a draft of a bill, "To authorize appropriations to the National Aeronautics and Space Administration for research and development, construction of facilities, and research and program management, and for other purposes," together with the sectional analysis thereof. It is submitted to the Speaker of the House of Representatives pursuant to Rule XL of that House.

Section 4 of the Act of June 15, 1959, 73 Stat. 73, 75, (42 U.S.C. 2460), provides that no appropriation may be made to the National Aeronautics and Space Administration unless previously authorized by legislation. It is the purpose of the enclosed bill to provide such requisite authorization in the amounts and for the purposes recommended by the President in the Budget of the United States Government for the fiscal year ending June 30, 1970. The bill would authorize appropriations to be made to the National Aeronautics and Space Administration in the sum of \$3,760,527,000, as follows: (1) for "Research and development," \$3,051,427,000; (2) for "Construction of facilities," \$58,200,000; and (3) for "Research and program management," \$650,900,000.

In addition to the amount that would be authorized under the draft bill, the President recommends that \$117,473,000, which has been reserved from apportionment to NASA by the Bureau of the Budget pursuant to the Revenue and Expenditure Control Act of 1968 (Pub. L. 90-364, 82 Stat. 251) be applied to the NASA "Space flight operations" program in fiscal year 1970. Thus the President recommends for NASA a total program amount of \$3,878,000,000, for the fiscal year 1970.

With respect to the draft bill herewith submitted, that bill is substantially the same as the National Aeronautics and Space Administration Authorization Act, 1969 (Pub. L. 90-373, 82 Stat. 280), except for the necessary changes in the dollar amounts involved, and the substantive and editorial changes hereinafter discussed.

Only one change has been made to the "Research and development" program line items; the "Apollo applications" line item has been amended to read "Space flight operations" in order to describe properly the authorization of appropriations for currently approved manned earth orbital missions of increasing duration and anticipated future manned space flight operations.

The "Construction of facilities" locational line items in section 1(b) differ from those enacted as part of the fiscal year 1969 Authorization Act only in that the locational line items for Ames Research Center, and Michoud Assembly Facility have been omitted, and line items for Electronics Research Center, Goddard Space Flight Center and Langley Research Center have been added, since no funds are being requested for the locations omitted and funds are being requested for those locations added. Because of these changes the line items under this appropriation have been increased from seven to eight.

In accordance with the President's Budget for the fiscal year 1970, the bill would change the title of the appropriation "Administrative operations" to "Research and program management" for the reason that the title "Administrative operations" is misleading insofar as it suggests that the appropriation is primarily an administrative overhead account. The new appropriation title "Research and program management" is more descriptive of the appropriation since it covers, for example, the direct expenses of operating NASA laboratories, research centers, development centers and launch centers; it covers the salaries of all NASA personnel responsible for carrying out the total NASA program (scientists, engineers and supporting technicians represent 70% of the total NASA civil service complement). Thus this appropriation provides funds for the Government's scientific, engineering and management manpower within NASA to plan, review and make major decisions on the work to be done at Government expense; and it provides funds to operate the NASA laboratories, established as the Government's technical interface for contract activities, which work with NASA's contractors in anticipating problems and in applying the results of NASA's in-house research work toward the solution of problems and the definition of improved concepts. This appropriation also provides funds for the maintenance and operation of the NASA capital plant. This is merely a change in title, and there is no substantive change in the scope or content of this appropriation. Because of this change in title, a conforming change to the preamble of the draft bill, which states its purpose, has also been made by substituting therein "research and program management" for "administrative operations".

The numbers of the paragraphs of subsection 1(b) to which reference is made in sections 2 and 3 have been changed due to the change in the number of locational line items included in subsection 1(b). No substantive changes are intended.

The bill would eliminate the prohibition on grants to nonprofit institutions barring Armed Forces recruiters (see section 1(h) of Pub. L. 90-373) and the prohibition on salary payments to NASA employees convicted as rioters (see section 5 of Pub. L. 90-373); however, if a NASA employee is so convicted he would continue to be subject to removal from his position pursuant to 5 U.S.C. 7313, applicable to all Government employees.

Finally, the last section of the draft bill, section 6, has been changed to provide that the bill, upon enactment, may be cited as the "National Aeronautics and Space Administration Authorization Act, 1970", rather than "1969".

The National Aeronautics and Space Administration recommends that the enclosed draft bill be enacted. The Bureau of the Budget advised on January 13, 1969, that there is no objection to the presentation of the draft bill to the Congress and that its enactment would be in accordance with the program of the President.

Sincerely yours,

T. O. PAINE, *Acting Administrator.*

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION,  
Washington, D.C., April 15, 1969.

HON. GEORGE P. MILLER,  
*Chairman, Committee on Science and Astronautics,  
House of Representatives,  
Washington, D.C.*

DEAR MR. CHAIRMAN: On January 15, 1969, I addressed a letter to the Speaker of the House of Representatives with which I enclosed a draft of a bill "To authorize appropriations to the National Aeronautics and Space Administration for research and development, construction of facilities, and research and program management, and for other purposes."

That bill was designed to provide the Congress with a draft of legislation to implement the Fiscal Year 1970 budget for the National Aeronautics and Space Administration submitted by President Johnson.

As you know, the present Administration has undertaken a re-examination of the proposed 1970 budgets of various agencies of the Government, including the National Aeronautics and Space Administration. That budget review has been completed and the Administration has approved certain changes in the line items of Section 1(a) (Research and development) of the bill included with the January 15 submission. There are no changes in any other section or subsection of that bill.

We note that you have introduced a bill which if enacted would become the National Aeronautics and Space Administration Authorization Act, 1970, in the form of H.R. 4046.

The NASA recommendations, submitted in my letter of January 15th and incorporated in H.R. 4046, included a total of \$3,051,427,000 for NASA's "Research and development" effort in Fiscal Year 1970. The revised approved budget represents a reduction to \$3,006,427,000 for that appropriation account. The latter is a net figure for "Research and development" resulting from a number of changes. To implement those changes the following amendments are recommended to the bill H.R. 4046:

Page 1:

Line 7: Change \$1,651,100,000 to \$1,691,100,000.

Line 8: Change \$236,627,000 to \$225,627,000.

Line 1: Change \$119,600,000 to \$117,600,000.  
Lines 2, 3: Change \$146,800,000 to \$138,800,000.  
Line 4: Change \$32,400,000 to \$20,400,000.  
Line 5: Change \$135,800,000 to \$128,400,000.  
Line 6: Change \$124,200,000 to \$112,600,000.  
Line 8: Change \$30,000,000 to \$27,500,000.  
Line 9: Change \$35,000,000 to \$33,550,000.  
Line 10: Change \$23,600,000 to \$22,100,000.  
Line 11: Change \$21,400,000 to \$20,250,000.  
Line 13: Change \$39,900,000 to \$36,950,000.  
Line 15: Change \$25,100,000 to \$22,850,000.  
Line 16: Change \$78,900,000 to \$77,700,000.  
Line 17: Change \$298,000,000 to \$278,000,000.

We are also attaching a revised bill embodying these amendments. In addition to the above items, \$117,473,000 of Fiscal Year 1969 funds, which were reserved from apportionment pursuant to the Revenue and Expenditure Control Act of 1968, will be available during the Fiscal Year 1970. This action was also planned under the original 1970 budget.

The Bureau of the Budget has advised that, if the bill H.R. 4046 is revised to reflect the amendments recommended above, enactment of the bill will be in accord with the program of the President.

Sincerely,

T. O. PAINE, *Administrator*

## COMMITTEE ACTIONS

### RESEARCH AND DEVELOPMENT

The original NASA Fiscal Year 1970 request for Research and Development was \$3,051,427,000. A revised budget was submitted by NASA subsequently which included \$3,006,427,000 or \$45,000,000 less than the original request for Research and Development. The Committee's review of the authorization request resulted in the addition of \$258,000,000 to the amended request. This action results in a recommended authorization of \$3,264,427,000 for Research and Development. Specific adjustments to major program areas were effected as follows:

#### APOLLO

NASA requested \$1,651,100,000 for continuation of the Apollo program in Fiscal Year 1970. NASA further amended the budget for the Apollo program and recommended \$1,691,100,000, or a net increase of \$29,000,000. The committee recommends an increase of \$75,700,000 over the amended budget as follows:

#### *Saturn V Vehicle Improvement*

During FY 1970 a portion of the increased funding recommended by the committee in the Saturn V program would be used for engineering, manufacture and test operations leading to the qualification of the simplified and improved J-2S engine on a schedule which would permit early incorporation in flight stages. Funds would also be applied to the engineering and manufacture of modification kits required for the stage itself to accommodate the new engine. Initial effort would be directed primarily toward incorporation of the J-2S in the S-IVB stage.

In addition, increased effort would be made on determining further improvements in the space vehicle and its operation. All of these efforts would be directed to obtaining more effective and efficient vehicles with lower cost in the manufacturer, production, assembly, test and checkout.

The committee therefore recommends that an additional \$32,100,000 in FY 1970 authorized funds be provided to support Saturn V vehicle improvements in the basic Apollo program.

#### *Lunar Exploration*

Presently, scientific equipment exists for only the first three lunar landings following the initial landing. No funding was provided in the Fiscal Year 1970 original budget request for scientific equipment and system modifications and improvements for a proposed series of an additional six landings.

Studies and development efforts indicate that substantial increases in the capabilities of the remaining missions can be attained at a rela-

tively modest cost. The Committee recommended that an additional \$83,600,000 in FY 1970 funds be provided to support these missions. The recommendation of the Committee was reinforced by a budget amendment recommending an increase of \$79,000,000 for lunar exploration. These funds will be used for development of surface science packages for these missions; science experiments for use in lunar orbit; modifying the Lunar Module to provide a three-day staytime on the surface; extension of Portable Life Support System capability; and developing a constant volume spacesuit and a lunar flying unit to significantly improve astronaut mobility on the surface. These developments will significantly improve this country's ability to explore the moon and the quality of data resulting from this exploration.

It is also the Committee's view that it is vital for NASA to conduct a sound program that maximizes safety and effectiveness in an operational sense. A launch rate of about three flights a year for the 1970-1972 time period will provide the most economic and efficient use of facilities, hardware, and personnel. Significant increases in this launch spacing can lead to major problems in safety, reliability, and cost effectiveness and makes it difficult to hold together the trained manpower team and retain their proficiency.

Based on the testimony before the Committee the original committee increase is recommended. Therefore, a net increase in authorization over the amended budget for lunar exploration of \$4,600,000 is recommended.

#### *Operations*

NASA requested \$445,800,000 as part of the Apollo line item for crew training, launch, flight and recovery operations for Fiscal Year 1970. In the amended budget NASA reduced this item by \$39,000,000 to \$406,800,000 on the assumption that the Apollo 11 mission would accomplish the lunar landing and total Apollo launches in Fiscal Year 1970 would be reduced from five to three. Based on testimony before the Committee on the stringent training requirements for all flights and the uncertainty as to the ultimate number of flights to assure maximum safety of operation, the Committee recommends the original NASA request for Apollo Operations of \$445,800,000.

Therefore, the Committee recommends an authorization of \$1,766,800,000 for continuation of the total Apollo program.

#### SPACE FLIGHT OPERATIONS

For Fiscal Year 1970, the NASA amended budget requested \$225,627,000 in new authorization for Space Flight Operations. The amended request is a net total of \$11.0 million less than the original NASA request of \$236,627,000 in new authorization for Space Flight Operations. Based on detailed testimony before the Committee the following actions were taken:

#### *Apollo Applications*

NASA originally requested \$191,327,000 in new authorization for Apollo Applications. The subsequent budget amendment reduced this request to \$134,327,000. The Committee agreed that the original request

by NASA for Apollo Applications would allow adequate program progress. A further reduction as proposed by the amended budget would:

- a. Delay the initiation of Apollo Application flights 5 months (when the program has already been delayed 18 months).
- b. Suspend production of Saturn IB vehicles No. 213 and 214 with subsequent increase in costs to complete the vehicles later.
- c. Delay the availability of a backup workshop and telescope mount by an additional 3 to 4 months beyond the 5 months already expected.

Therefore, the Committee recommends \$191,327,000 in new authorization for Apollo Applications.

#### *Space Station*

NASA has requested a total of \$9,000,000 for initiation of a Space Station program. Of this amount, \$6,000,000 is intended for studies of space stations and their operations, and \$3,000,000 for study of space shuttles for logistic resupply of stations in space in the 1975-85 time period.

The committee believes that such a program has major potential in areas of increased scientific knowledge, advance of technology, and beneficial applications. In addition, the Committee is convinced that by utilizing a long-term space station in earth orbit, coupled with a low-cost recoverable and reusable logistics system, a major reduction in the cost of space operations can be accomplished. Because of this belief, the Committee feels that the Space Station-Space Shuttle program warrants additional support. NASA has indicated that the basic technology is available and that alternate plans exist to proceed with this program at this time at an efficient pace. This entails deepening of the advanced systems technology base and the planning base and initiation of the definition and development of critical hardware and experiments which would pace the program.

Therefore, the Committee recommends an additional \$66,000,000 be added to the FY 1970 Space Flight Operations line item. Approximately half of these funds would be used to augment the \$6,000,000 presently included in NASA's request to provide for an expanded definition and preliminary design effort: to define experiments and experiment modules in many science and applications areas such as astronomy, space physics, manufacturing techniques, earth applications, and for modules for crew support, maintenance, docking and cargo handling. Also, these funds will support advanced subsystems development in major areas such as life support, electrical power and information management.

The Committee believes that the balance of the \$66,000,000 additional funding is required in FY 1970 for the space shuttle. Addition of these funds at this time will assure the early fulfillment of the goal of achieving relatively low-cost space transportation needed to bring forth many of the practical benefits of space. These funds will be utilized to provide an accelerated definition and preliminary design effort and configuration selection which will in turn provide a greatly improved basis for proceeding with the technical development. The largest amount of these funds, however, will be for advanced systems development emphasizing advanced rocket engine development, long life reusable subsystems, onboard checkout equipment, high tempera-

ture structure design, simplified operations and traffic control techniques, and other approaches aimed at major reductions in operating costs.

The Committee is concerned that failure to provide these funds will have a deleterious effect on the nation's future space programs. A substantial period of earth orbital inactivity is foreseen during the 1970's unless these funds are provided. In addition, the low-cost space transportation goal will not be attained in time to support space station operations and new space technology developments will be set back.

#### *Saturn V Production*

The Committee recommends the authorization of additional funds in the amount of \$52,200,000 to reinstitute Saturn V production. This was further supported by a budget amendment adding \$46,000,000. After a careful review of the requirements for a sound space program into the next decade and the most effective means of realizing returns from our basic Apollo investment, the Committee is convinced that follow-on Saturn V launch vehicles must be available not only to carry on progressive earth orbital, lunar, and deep-space operations in the future but also to preserve the forward progress of the United States in science and technology.

The additional \$52,200,000 recommended by the Committee will provide for procurement of long-lead materials and equipment, including subsystems and components; retention of necessary contractor manpower; and reactivation of critical suppliers and vendors. These funds involve the three stages and the engines of the Saturn V.

NASA has indicated that future Saturn V's can be produced and checked out at lower costs. This objective can be achieved by taking full advantage of the learning experience accumulated to date, and by moving toward a simplified, standardized launch vehicle with increased performance at a lower cost. Timing is critical in the sense that if the major production base is lost, the start-up operations, the requalification requirements, and the loss of learning will obviate the ability to achieve potential cost reductions. For reasons of basic economy and efficiency, as well as continued progress in space into the next decade, the Committee recommends approval of the \$52.2 million authorization to provide for follow-on Saturn V launch vehicles. The recommendation was further confirmed by the NASA budget amendment which proposed an increase of \$46,000,000 for this effort. Therefore, the Committee recommends a net increase in new authorization over the amended budget of \$6,200,000 for Saturn V production.

The Committee, therefore, recommends \$354,827,000 in new authorization for Fiscal Year 1970 for the total Space Flight Operations line item.

#### SUPPORTING RESEARCH AND TECHNOLOGY

NASA requested a total of \$55,600,000 for Supporting Research and Technology in the three major Space Science programs. These funds have been earmarked for support of 880 proposed research tasks, most of which would be carried out under contract by universities, industry, nonprofit organizations, and other government agencies; a

portion of these tasks are slated to be performed in-house at NASA centers.

The Committee recommends a total reduction of \$12 million in Space Science SR&T funds distributed as follows:

Physics and Astronomy—\$3 million reduction in \$19.6 million request

Lunar and Planetary—\$4 million reduction in \$24.6 million request

Bioscience—\$5 million reduction in \$11.4 million request

While the Committee recognizes the value of such research, and has supported it over the years, some of the proposed research tasks are believed not to be urgent, and therefore, can be deferred. Even more to the point, these modest reductions are recommended in order to help establish a better balance within the Office of Space Science and Applications between the level of effort in space science activities, on the one hand, and R&D work in the Office of Applications, on the other. The members of the committee are unanimous in the belief that Space Applications deserve much greater emphasis than they have received to date, and if, to achieve this goal, a slightly reduced effort in space science activities is required, the committee is prepared to accept this consequence.

#### PHYSICS AND ASTRONOMY

In addition to the reduction of \$3 million in NASA's request for SR&T, the Committee also voted to defer funding for four Explorer class satellites which NASA has proposed for initiation during fiscal year 1970. NASA requested \$1 million to initiate development of two additional small scientific satellites and another \$1 million to initiate two additional small astronomy satellites. As the names of these spacecraft indicate, the former are conceived to carry out certain space physics experiments, while the latter would be designed to make astronomical observations. Two SSS and two SAS spacecraft have previously been authorized and are now under development, along with two dozen or so Explorer class satellites that are scheduled for launch between now and the end of calendar year 1974.

Over the years, large-scale investments have been made in both space physics and astronomy. Important work remains to be done, of course, but these four new starts in the Explorer program do not, in the Committee's judgment, represent urgent experiments.

#### LUNAR AND PLANETARY EXPLORATION

In addition to the reduction of \$4,000,000 in NASA's request for SR&T, the Committee also voted to defer funding for the Mariner Mercury 1973 mission for which NASA has requested \$3,900,000 for fiscal year 1970 as the initial increment of an estimated total cost of approximately \$90,000,000 for this single mission.

The committee recognizes that the swing-by Venus to Mercury is an attractive mission. However, it must be considered in the context of our entire Planetary Exploration program and the anticipated costs involved in that program.

In addition to the seven Mariners already launched to Mars and Venus, NASA's Planetary Exploration program includes four approved future missions, two Mariners in 1971 and two Vikings in 1973,

all of which emphasize the further investigation of Mars. These four missions represent expenditures of more than one-half billion dollars, mostly during the next three years. Furthermore, the so-called "Grand Tour" mission to the four outer planets (Jupiter, Saturn, Uranus, Neptune) in the late 1970's is under study within NASA and will probably be presented to the Congress for authorization next year. Depending upon the type of launch vehicle to be utilized, the "Grand Tour" mission will cost, at the least, many hundreds of millions, or at most several billions of dollars.

In summary, NASA's Planetary Exploration program, while not as aggressive or diversified as some would like, represents very substantial future expenditures, and even today is the largest part, dollar-wise, of the Space Science program. Therefore, any effort to redress the balance between applications satellite systems and space science projects must begin with the most careful scrutiny of proposed new starts in the Planetary Exploration program.

It should be noted that the Mariner Mercury 1973 mission probably can be done even if authorization is deferred until fiscal year 1971. Depending upon factors such as NASA's responsiveness to expressions of the sense of Congress regarding increasing the effort in Space Applications, the Committee may wish to reconsider the 1973 Mercury mission next year.

In any event, the swing-by Venus to Mercury can be attempted again in 1975, although the energy requirements will be somewhat higher than in 1973. Therefore, in view of this subsequent opportunity, refusal to authorize this project for initiation in fiscal year 1970 can be viewed as a deferral rather than outright rejection.

#### BIOSCIENCE

The largest reduction in SR&T funds recommended by the Committee is in the Bioscience program. As previously noted, of the \$11,100,000 requested by NASA, the Committee recommends a \$5,000,000 reduction on the basis that the Biosatellite project will be concluded within the next several months, and there are no follow-on flight missions in prospect. The Committee takes the position that a strong research effort, to be most meaningful, should be accompanied by a flight program. Unfortunately, NASA has all but cancelled the remainder of the Biosatellite program. Last December, the two 21-day Biosatellite missions were terminated, and under the revised NASA budget submitted to Congress in April one of the two remaining 30-day Biosatellite missions was also slated to be cancelled.

It has been estimated that cancellation of Biosatellite-F will result in at least \$2,000,000 in unrecoverable hardware costs, and if an appropriate portion of the development costs of the 30-day satellite were assigned to Biosatellite-F, the amount of unrecoverable costs would be many millions more.

Because the nation has such a substantial investment in Biosatellite-F, and because the study of an instrumented primate in space for 30 days has been described as one of the most important research projects leading to a better understanding of the physiological and psychological effects of the space environment on men, the Committee voted to restore the \$12,000,000 which the budget amendment had eliminated from the original budget submission for fiscal year 1970.

Accordingly, the full amount of the original request, \$18,000,000, is authorized, and NASA is instructed to continue work on Biosatellite-F.

#### SPACE APPLICATIONS

The Committee takes the position that the Space Applications program should receive greater emphasis, and the Earth Resources Survey project is of special interest. Accordingly, the Committee voted to increase, by \$10,000,000, the amount requested by NASA for support of the Earth Resources Technology Satellite for fiscal year 1970. This will make available \$24,100,000 for this purpose during the forthcoming fiscal year.

Numerous studies have been completed which conclude that an earth resources satellite system has the greatest potential for producing tangible economic benefits of any space project.

The Committee believes that the development of ERTS should be undertaken immediately and aggressively pursued; the launch schedule should be compressed if possible; plans for additional spacecraft should be made; and work on ground equipment should be undertaken without delay.

In order that this expression of Congressional intent shall not be disregarded, the NASA Authorization Bill for fiscal year 1970 has been amended to prohibit the transfer or reprogramming of any portion of the \$24,100,000 authorized for ERTS to any other use.

#### LAUNCH VEHICLE PROCUREMENT

In its original budget submission, NASA requested \$124,200,000 for launch vehicle procurement. The budget amendment submitted in April requests \$112,600,000, a reduction of \$11,600,000, which included a reduction of \$1,600,000 for procurement of a Delta launch vehicle designated for the Biosatellite-F mission. Since the Subcommittee voted to reinstate the Biosatellite-F mission, it is necessary that the \$1,600,000 for procurement of a Delta launch vehicle also be restored.

#### SPACE VEHICLE SYSTEMS, ELECTRONICS SYSTEMS, HUMAN FACTOR SYSTEMS, BASIC RESEARCH AND SPACE POWER AND ELECTRIC PROPULSION SYSTEMS

In its initial review of NASA's budget request the amounts for these five program areas were approved as submitted. Upon receipt of the Budget Amendment which reduced these programs, the Committee reviewed again in detail the budget justifications. It was concluded that the additional information provided by NASA with the Budget Amendment did not warrant any change in the Committee's action on these programs. Accordingly, the Committee recommends approval of the original budget amounts shown as follows:

	Original budget	Amended budget	Committee recommendation
Space Vehicle Systems.....	\$30,000,000	\$27,500,000	\$30,000,000
Electronic Systems.....	35,000,000	33,550,000	35,000,000
Human Factor Systems.....	23,600,000	22,100,000	23,600,000
Basic Research.....	21,400,000	20,250,000	21,400,000
Space Power & Electric Propulsion.....	39,900,000	36,950,000	39,900,000

#### NUCLEAR ROCKETS

NASA's initial budget request for the Nuclear Rockets Program was \$36,500,000; the Budget Amendment contains the same amount. This is substantially less than the \$55,000,000 authorized for FY 1969 and also represents a major reduction from the FY 1968 level.

The Committee is recommending that NASA proceed with the NERVA engine development at a somewhat faster pace than proposed by NASA. To do so, an increase in the Nuclear Rockets Program of \$13,500,000 is recommended.

This action is taken on the basis that the nuclear rocket will provide an across-the-board advance in space propulsion in the late 1970's and 1980's. Launch vehicle systems using a nuclear upper stage in combination with a variety of lower stages could perform many missions in considerably shorter times or carry much larger payloads than our present launch vehicles. For example, proceeding at a somewhat more rapid pace would provide NASA with an early cost effective means of using NERVA for round-trip low earth orbit-to-synchronous-orbit or low earth orbit-to-lunar orbit of large space station modules being planned for the 1970's.

In testimony before the Committee, it was evident that this potential high performance has been shown to be feasible. Over the past several years all significant milestones have been achieved very successfully in the extensive technology program. It was also evident from the testimony that the FY 1970 budget request provided for a minimum program and that modest additional funding would allow for more efficient progress and enhance the possibility of earlier flight experience and use.

The added funds would be used for the following:

To increase the fabrication and procurement of development components—particularly in long lead-time items—and provide greater assurance of meeting the present schedule of delivering a flight-ready engine in late 1976.

To advance the procurement of a new exhaust duct and associated equipment required for the existing engine test stand in Nevada.

To provide some increases in contractor technical staffing.

To accelerate stage system design concepts, analysis studies, and associated facility design leading toward the initiation of a stage development at a later date.

Within the Nuclear Rockets Program it is recommended that the increase of \$13,500,000 be allocated approximately as follows:

	NASA request	Recommended changes	Recommended authorization
NERVA.....	\$27, 500, 000	+\$11, 500, 000	\$39, 000, 000
Nuclear Rocket Development Station.....	1, 000, 000	+500, 000	1, 500, 000
Supporting research and technology.....	8, 000, 000	+1, 500, 000	9, 500, 000
Total.....	36, 500, 000	+13, 500, 000	50, 000, 000

In summary, because of the great importance of this program to the long-range future of space flight the Committee recommends that an additional \$13,500,000 in FY 1970 authorized funds be provided for a total of \$50,000,000. Additionally the Committee recommends that the law be written so as to stipulate that the \$50,000,000 is to be used only for the Nuclear Rockets Program.

#### CHEMICAL PROPULSION

NASA initially requested \$25,100,000 for Chemical Propulsion. In its Budget Amendment, NASA reduced this request by \$2,250,000, to \$22,850,000.

The recommendation of the Committee is to add \$5,250,000 for a total of \$28,100,000, of which \$2,250,000 is to restore funds cut by the Budget Amendment and \$3,000,000 is for an increase in large solid motor work.

In previous years this Committee has been a strong supporter of the 260-inch solid rocket motor program because of its inherent simplicity, reliability and potential for achieving major cost reductions in payload cost per pound. The next major logical step in this program is the fabrication of a full-length test booster with a movable nozzle. Such a test is important because the reliability of large solid motors is yet to be proven in actual full-length testing, although the results of the three half-length firings to date have been highly encouraging.

In moving toward the eventual fabrication of a full-length booster, it appears necessary to accomplish some important intermediate steps. On the basis that some FY 1969 funds authorized for low cost booster technology will be used to pay for continuing technical improvements in the solid rocket motor, the Committee believes that an additional \$3,000,000 could fruitfully be used as follows:

Continuation of such technology projects as the power and hydraulic components of the steering system for the booster (about \$1,100,000).

To broaden the examination of low cost booster technology to include detailed design of an improved motor upper stage, facility modifications and transport systems (estimated at \$700,000).

To procure materials and tooling for a first full-length prototype motor case, movable nozzle and steering system (estimated at \$1,200,000).

In recommending an increase of \$5,250,000 in FY 1970 authorized funds, the Committee also recommends that the law be written so as to stipulate that \$3,000,000 of the funds authorized are to be used only for the 260-inch large solid motor project.

#### AERONAUTICAL VEHICLES

NASA initially requested \$78,900,000 for Aeronautical Vehicles in its budget. The Budget Amendment reduced this amount by \$1,200,000, to \$77,700,000.

To the initial request of \$78,900,000 the Subcommittee had added a modest increase of \$2,000,000 for a total authorization of \$80,900,000.

The additional \$2,000,000 would be used approximately as follows:

\$200,000: Structural analysis—mainly in helicopters.

\$800,000: V/STOL propulsion—lightweight, small engine components, and lift-fan components.

\$500,000: V/STOL noise—rotor and lift-fan noise source analysis.

\$500,000: Operations research—clear air turbulence, fog dispersal, and low altitude turbulence.

This increase is in line with the earlier statement that not enough work is being done to attack the urgent problems facing us in aeronautics, and the Committee also recommends restoring the \$1,200,000 cut by the Budget Amendment. Therefore, the total amount recommended for authorization is \$80,900,000.

#### TRACKING AND DATA ACQUISITION

For Tracking and Data Acquisition, NASA initially requested \$298 million, which was \$18.3 million more than the FY 1969 Operating Plan and \$8.2 million more than was authorized. The requested increase was attributed primarily to increasing workloads of the three major networks: Satellite Network, the Manned Space Flight Network, and the Deep Space Network.

The material submitted by NASA and the presentation before the Committee generally supported the NASA contention that the workload on all of the networks in the Tracking and Data Acquisition area will increase in future years, including FY 1970, both as to quantity and complexity of data to be acquired and processed.

The Budget Amendment reduced NASA's request by \$20 million, from \$298 million to \$278 million. This reduction would result in: (1) deferral of all planned improvements to the networks and (2) deferral of improved communications. Additionally, other reductions would be necessary: the items to be selected would be among these

possibilities: (1) closure of selected stations, (2) reduced staffing, (3) further decreases in processing information and (4) reduction or elimination of real-time television coverage of Apollo missions.

Because of the above impacts, the Committee did not agree with the reduction of \$20 million. A smaller cut of \$5 million in the initial budget request had been made for reasons outlined in the following paragraphs.

A report issued by the Comptroller General on March 11, 1969, on the management and operation of the Madrid facilities contained data suggesting that a number of deficiencies should be corrected. Additionally, previous GAO reports have noted deficiencies at tracking stations in financial controls, real property controls and a possible excessive use of special-purpose equipment which can be used only with one mission or class of missions. In essence, these reports suggest the possibility of improved efficiency.

Furthermore, it seems desirable that stronger evidence be presented in the future that NASA is imposing strict discipline over the amounts of data and the lengths of time data is to be collected from satellites which are active for long periods of time.

Therefore, to emphasize the concern of the Committee on not impairing network capabilities—but still taking into account the issues of improved efficiency and more intensive scrutiny of requirements being placed on the three operational networks—an increase of \$15 million to the Budget Amendment amount is recommended. This action results in a recommended authorization of \$293 million which is \$5 million less than the initial NASA request.

#### RESEARCH AND PROGRAM MANAGEMENT

The NASA Fiscal Year 1970 request for Research and Program Management (formerly called "Administrative Operations") totaled \$650,900,000 which represented an increase of \$2,639,000 over the Fiscal Year 1969 level of operations. The Committee reduced the NASA request by \$7,150,000, recommending that \$643,750,000 be authorized for these purposes. Specific reductions to major program areas were effected as follows:

##### MANNED SPACE FLIGHT

For Fiscal Year 1970 NASA requested \$307,450,000 for Research and Program Management to support the field activities of the Office of Manned Space Flight at the Kennedy Space Center, the Manned Spacecraft Center and the Marshall Space Flight Center. The Fiscal Year 1970 request is \$4.6 million less than the current year's operating level and \$11.5 million less than originally requested for Fiscal Year 1969.

Personnel compensation and related costs account for \$201.8 million or 66% of the request. This will support an end Fiscal Year 1970 strength of 13,935 which is 861 positions less than requested for FY 1969. The Committee also notes that the service support contract personnel strength will be reduced at the Manned Space Flight centers from 21,201 to 19,076 by end FY 1970, a reduction of 2,125 positions.

The request for the other operating accounts—Travel, Automatic Data Processing, Facilities and Technical Services and Administra-

tive Support—also reflects a decrease of roughly 3.5% from the FY 1969 operating level.

The Committee's review and analysis, including on-site investigations in the field, revealed that concerted efforts are being made to reduce costs on the Research and Program Management accounts. The Office of Manned Space Flight is to be commended for their efforts in this regard.

However, the Committee's analysis of the Fiscal Year 1970 request revealed that certain of the accounts, specifically Facilities Services, Technical Services and Administrative Support, could be reduced further without serious impact on current on-going and projected programs. Consequently, the Committee has reduced the NASA request by \$3,450,000. This would authorize \$304,000,000 for Research and Program Management in support of Manned Space Flight field operations.

##### ADVANCED RESEARCH AND TECHNOLOGY

The fiscal year 1970 Advanced Research and Technology budget request for Research and Program Management is \$195,600,000. This amount is \$1,700,000 higher than NASA's fiscal year 1969 Authorization and Operating Plan. After considering the fact that this area has been rising as a percentage of the Advanced Research and Technology budget (which has been decreasing), the Committee's view is that the amount authorized for FY 1970 be maintained at the FY 1969 level. Accordingly, a reduction of \$1,700,000 is recommended for a total authorized amount of \$193,900,000.

##### HEADQUARTERS

NASA requested \$59,797,000 for Research and Program Management to operate the headquarters for fiscal year 1970. The Committee noted that the program submitted was \$809,000 less than requested for fiscal year 1969 and \$2,000 less than the level reflected in the current operating plan.

The Committee has critically reviewed the fiscal year 1970 requirements for the NASA headquarters operations and considers that this account should be further reduced, despite apparent efforts on the part of NASA to hold the line on spending. A reduction of \$2.0 million in the request has been effected as follows:

(a) A general economy reduction of \$500,000 to be applied to functional categories at the discretion of the Administrator, NASA.

(b) A reduction of \$1,500,000 to be specifically applied against the funding for the Public Affairs Office at the NASA headquarters. Although the Committee recognizes that the space program requires a strong public affairs effort in the interest of keeping the general public fully informed, it was the unanimous view of the Committee that the management and supervision of these activities at the headquarters level leaves much to be desired. Consequently the Committee stipulates that this reduction of \$1,500,000 shall be specifically applied against funding for the headquarters Public Affairs Office and further that none of this reduction shall be levied against public affairs accounts at the field center level.

## OVERTHROW OF GOVERNMENT

The Committee added a section to the bill, section 6, which requires that no part of the funds authorized under this act shall be used to provide payment, assistance, or services, in any form, to any person who is convicted by a court of competent jurisdiction of an act to overthrow the Government of the United States.

This section places the positive responsibility upon NASA to insure that proper administrative measures are established to carry out the intent of the Congress. The intent is clear: No Government funds should be paid to those who have been convicted of an act to overthrow the Government of the United States.

The Committee believes that this section is necessary as part of a total attempt to deny Federal support, in any form, to those who would tear down our Nation by force and violence.

## CAMPUS DISORDERS

In view of the current unrest on campuses of American colleges and universities which in many cases has been seriously disruptive of the orderly administration of such institutions, and in some cases has involved unlawful activities, the Committee voted to include a new section 7 in the bill which is designed to deny the use of funds appropriated to NASA for support of certain persons under particular circumstances. Specifically, this new provision provides that if any institution of higher education determines, after affording notice and opportunity for hearing to an individual attending or employed by such institution,

(a) that such individual has, after the date of the enactment of this Act, wilfully refused to obey a lawful regulation or order of such institution and that such refusal was of a serious nature and contributed to the disruption of the administration of such institution; or

(b) that such individual has been convicted in any Federal, State, or local court of competent jurisdiction of inciting, promoting, or carrying on a riot, or convicted of any group activity resulting in material damage of property, or injury to persons, found to be in violation of Federal, State or local laws designed to protect persons or property in the community concerned;

then the institution shall deny any further payments to or for the benefit of such individual which (but for this section) would be due or payable to such individual and no part of any funds appropriated pursuant to this Act shall be available for the payment of any amount (as salary, as a loan or grant of any kind, or otherwise) to such individual.

## COMMITTEE VIEWS

### MODIFICATION AND REHABILITATION TYPE PROJECTS

The Committee has approved the NASA request for \$9.0 million for major capital plant improvements and repairs identified as "Modifications and Rehabilitations at All Locations" which is part of the line item "Various Locations" in the Construction of Facilities program. The Committee indorses the concept envisioned by this type of project in that it will reduce the large backlog of deferred facilities maintenance that has been developing at most of the field centers.

However, the Committee does not agree with the method of presentation of this type of project used by NASA in the budget justification books. The overall project cost was presented as a lump sum amount, and although several "typical examples" of the nature of the work contemplated were described, insufficient definitive data were provided as to projects, scope of work, project costs and locations.

Specific inquiries during the course of the hearings on H.R. 10251 brought forth sufficient project data to enable the Committee to analyze the requirements. The Committee considers that these data on the twenty-five projects involved should have been provided in the first instance.

To avoid a repetition of this undesirable practice in the future the Committee desires that NASA:

(1) Identify individually in the budget justification data as separate line items each construction project, including alterations and additions to existing buildings and structures.

(2) Spell out the unit cost data for each proposed facility in sufficient detail to permit ready analysis and comparison.

(3) Confine the budget classification of "Modifications and Rehabilitation" to major structural repair work, deferred maintenance, and replacement of installed equipment.

(4) Discontinue to the fullest extent possible the practice of stating budget costs only in lump sum totals not only for rehabilitation and modification type work, but for all construction requirements.

## SECTIONAL ANALYSIS

*Section 1*

*Subsections (a), (b), and (c)* would authorize to be appropriated to the National Aeronautics and Space Administration funds, in the total amount of \$3,966,377,000, as follows: (a) for "Research and development," a total of 19 program line items aggregating the sum of \$3,264,427,000; (b) for "Construction of facilities," a total of 6 locational line items, together with one for various locations and one for facility planning and design, aggregating the sum of \$58,200,000; and (c) for "Research and program management," \$643,750,000.

*Subsection 1(d)* would authorize the use of appropriations for "Research and development" for: (1) items of a capital nature (other than the acquisition of land) required for the performance of research and development contracts; and, (2) grants to nonprofit institutions of higher education, or to nonprofit organizations whose primary purpose is the conduct of scientific research, for purchase or construction of additional research facilities. Title to such facilities shall be vested in the United States unless the Administrator determines that the national program of aeronautical and space activities will best be served by vesting title in any such grantee institution. Moreover, each such grant shall be made under such conditions as the Administrator shall find necessary to insure that the United States will receive therefrom benefit adequate to justify the making of that grant.

In either case no funds may be used for the construction of a facility the estimated cost of which, including collateral equipment, exceeds \$250,000 unless the Administrator notifies the Speaker of the House, the President of the Senate and the specified committees of the Congress of the nature, location, and estimated cost of such facility.

*Subsection 1(e)* would provide that, when so specified in an appropriation Act, (1) any amount appropriated for "Research and development" or for "Construction of facilities" may remain available without fiscal year limitation, and (2) contracts for maintenance and operation of facilities and support services may be entered into under the "Research and program management" appropriation for periods not in excess of twelve months beginning at any time during the fiscal year.

*Subsection 1(f)* would authorize the use of not to exceed \$35,000 of "Research and program management" appropriation funds for scientific consultations or extraordinary expenses, including representation and official entertainment expenses, upon the authority of the Administrator, whose determination shall be final and conclusive.

*Subsection 1(g)* would provide that no funds appropriated pursuant to subsection 1(e) for maintenance, repair, alteration and minor construction may be used to construct any new facility the estimated cost of which, including collateral equipment, exceeds \$100,000.

*Section 2*

Section 2 would authorize the 5 per centum upward variation of any of the sums authorized for the "Construction of facilities" line items (other than facility planning and design) when, in the discretion of the Administrator, this is needed to meet unusual cost variations. However, the total cost of all work authorized under these line items may not exceed the total sum authorized for "Construction of facilities" under subsection 1(b), paragraphs (i) through (7).

*Section 3*

Section 3 would provide that not more than one-half of 1 per centum of the funds appropriated for "Research and development" may be transferred to the "Construction of facilities" appropriation and, when so transferred, together with \$10,000,000 of the funds appropriated for "Construction of facilities," shall be available for the construction of facilities and land acquisition at any location if (1) the Administrator determines that such action is necessary because of changes in the space program or new scientific or engineering developments, and (2) that deferral of such action until the next authorization Act is enacted would be inconsistent with the interest of the Nation in aeronautical and space activities. However, no such funds may be obligated until 30 days have passed after the Administrator or his designee has transmitted to the Speaker of the House, the President of the Senate and the specified committees of Congress a written report containing a description of the project, its cost, and the reason why such project is necessary in the national interest, or each such committee before the expiration of such 30-day period has notified the Administrator that no objection to the proposed action will be made.

*Section 4*

Section 4 would provide that, notwithstanding any other provision of this Act—

(1) no amount appropriated pursuant to this Act may be used for any program deleted by the Congress from requests as originally made to either the House Committee on Science and Astronautics or the Senate Committee on Aeronautical and Space Sciences;

(2) no amount appropriated pursuant to this Act may be used for any program in excess of the amount actually authorized for that particular program by subsections 1(a) and 1(c); and,

(3) no amount appropriated pursuant to this Act may be used for any program which has not been presented to or requested of either such committee.

unless (A) a period of 30 days has passed after the receipt by the Speaker of the House, the President of the Senate and each such committee of notice given by the Administrator or his designee containing a full and complete statement of the action proposed to be taken and the facts and circumstances relied upon in support of such proposed action, or (B) each such committee before the expiration of such period has transmitted to the Administrator written notice to the effect that such committee has no objection to the proposed action.

*Section 5*

Section 5 would express the sense of the Congress that it is in the national interest that consideration be given to geographical distribution of Federal research funds whenever feasible and that the National Aeronautics and Space Administration should explore ways and means of distributing its research and development funds whenever feasible.

*Section 6*

The Committee, by this section, expresses its strong conviction that payment, assistance, or services in any form provided by the FY 1970 NASA Authorization Act shall be denied to any persons convicted by any court of competent jurisdiction of an attempt to overthrow the Government of the United States by force or violence. The Section makes it clear that NASA is to establish the necessary mechanisms and procedures necessary to carry out the intent of Section 6.

*Section 7*

This section makes clear the Committee's firm intent to deny the use of funds appropriated to NASA and allocated to institutions of higher education for the purpose of supporting or rendering assistance to individuals attending or employed by such institutions who are found guilty of willfully refusing to obey a lawful regulation or order of such institution in circumstances of serious or disruptive consequences, or who are convicted in Federal, State, or local courts of competent jurisdiction of inciting, promoting, or carrying out a riot, or convicted of any group activity resulting in material damage of property or injury to persons, or convicted of violations of Federal, State, or local laws designed to protect persons and property in the community concerned.

Section 7 further is intended to deny further payments to or for the benefit of such individuals that would be otherwise due, and no funds appropriated by this Act shall be available for payment to such individuals.

*Section 8*

Section 8 would provide that the Act may be cited as the "National Aeronautics and Space Administration Authorization Act, 1970".

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COST AND BUDGET DATA

The bill will authorize appropriations for Fiscal Year 1969 in the amount of \$3,966,377,000.

## ADDITIONAL VIEWS OF HON. JAMES G. FULTON

### EXCESS AUTHORIZATION

For some time, I have expressed concern over the large amounts of unfunded authorization that NASA has had available for its programs. Despite the fact that NASA now has over \$327,070,000 in unfunded authorizations from prior year actions by this committee and the Congress, NASA continues to request authorization levels far above those needed.

A good example can be found in the history of the NASA facility planning and design account. There has *always* been a significant balance of unfunded authorization in this account, at times as much as three times the amount of new authorization being requested in a given year. And yet NASA continued to request new authorization each year despite comparatively large unfunded balances.

Since the inception of the space program the Congress has authorized \$70.4 million for facility planning and design. Only \$53.5 million of the amount authorized has been funded. Of the \$16.9 million unfunded, authorization in the amount of \$11.9 million has been automatically rescinded under the provisions of section 307 of the National Aeronautics and Space Act of 1958. At the present time about \$5 million in unfunded authorization remain on the books in this account alone. NASA ignored the unfunded and unused authorization and requested an additional \$3.5 million in new authorization for fiscal year 1970.

I have always been a strong supporter of advance planning and have often criticized NASA for failure to pay sufficient attention to this aspect of the space program. The facility planning and design account serves a good purpose in this regard since it affords NASA the opportunity to plan ahead for critical facilities requirements on a long-range basis. I intend to continue to support facility planning and design requirements, but I consider that the Congress *must* insist that NASA use existing authorization made available for these purposes before requesting new authorization.

In order to place the authorizing process in proper perspective with the appropriation process, I recommend that Congress require that all unfunded authorization be automatically canceled by the end of the fiscal year for which the authorization was approved. For example, any unfunded authorization resulting from the difference between authorization and appropriation actions for fiscal year 1970 would be automatically canceled by the end of fiscal year 1970. This would provide NASA with all of the flexibility it might require to effect necessary reprogramming between line items and it would also terminate the current malpractice of carrying over for several years large amounts of unfunded authorization.

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I recommend that NASA hereafter reduce its annual authorization request to the Congress by the amount of all unfunded prior year authorization in existence at the time of the annual request.

### RESCHEDULING OF SATURN V VEHICLE PRODUCTION

For the last several years, I have consistently opposed the poor scheduling plans of NASA for the procurement of the costly and complex Saturn V launch vehicle at uneconomical levels of production. As I pointed out, the NASA plans to manufacture as few as two Saturn V vehicles a year would result in the astronomical cost of about a quarter of a billion dollars per vehicle.

I am pleased to note that my arguments for a more economical plan of production have borne some fruit. During the hearings conducted on the fiscal year 1970 NASA budget, the Associate Administrator for Manned Space Flight, Dr. George Mueller, assured the committee that the minimum rate of production for the Saturn V vehicle has been set at no less than three a year with the probability that an even more economical level of production will be used.

I have consistently pressed NASA to use more of the advanced missions funds that have been authorized and appropriated for advance planning to insure the development of adequate missions to support economical levels of production of vehicles. No missions—no vehicles.

### ASTRONAUTS ON SPACE COUNCIL

On March 12, 1969, I introduced H.R. 8854 which called for the appointment of an astronaut on the National Aeronautics and Space Council and for the selection of an astronaut as the Executive Secretary of the Council.

It is a pleasure to learn that on May 15, 1969, the White House announced the selection of Lt. Col. William A. Anders, one of the three astronauts who circled the moon last December, to be the Executive Secretary of the Council. I heartily congratulate the President and the Vice President on this wise choice. With his extensive technical background, his flight experience, and his desire to involve himself in U.S. research and exploration policies of today, Colonel Anders will bring much to the Council.

I recommend that, to further development of current policy on aerospace matters of critical importance to our world, the Council meet regularly with improved attendance by its members. The record to date for Council meetings has been far from impressive. If the press or other official duties prevents regular attendance at the periodic meetings of the Council, consideration should be given to reconstituting the membership of the Council. I am giving some little study as to how the U.S. Space Council can be reconstituted.

JAMES G. FULTON.

91ST CONGRESS }  
1st Session }

SENATE

{ REPORT  
No. 91-282 }NASA AUTHORIZATION FOR  
FISCAL YEAR 1970

## REPORT

OF THE

COMMITTEE ON  
AERONAUTICAL AND SPACE SCIENCES  
UNITED STATES SENATE

ON

H.R. 11271

AN ACT TO AUTHORIZE APPROPRIATIONS TO THE  
NATIONAL AERONAUTICS AND SPACE ADMINISTRA-  
TION FOR RESEARCH AND DEVELOPMENT, CON-  
STRUCTION OF FACILITIES, AND RESEARCH AND  
PROGRAM MANAGEMENT, AND FOR OTHER PURPOSES

JUNE 26, 1969.—Ordered to be printed

U.S. GOVERNMENT PRINTING OFFICE  
WASHINGTON : 1969

28-113 O

## COMMITTEE ON AERONAUTICAL AND SPACE SCIENCES

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(II)

91st CONGRESS }  
1st Session }

SENATE

**Calendar No. 273**

REPORT  
No. 282

**AUTHORIZING APPROPRIATIONS TO THE NATIONAL  
AERONAUTICS AND SPACE ADMINISTRATION**

JUNE 26, 1969.—Ordered to be printed

Mr. ANDERSON, from the Committee on Aeronautical and Space Sciences, submitted the following

**REPORT**

[To accompany 11271]

The Committee on Aeronautical and Space Sciences, to which was referred the bill (H.R. 11271) to authorize appropriations to the National Aeronautics and Space Administration for research and development, construction of facilities, and research and program management, and for other purposes, having considered the same, reports favorably thereon, with an amendment striking out all after the enacting clause and inserting the committee amendment, and recommends that the bill be passed.

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**CONGRESSIONAL ADJUSTMENTS TO NASA  
FISCAL YEAR 1970 REQUEST**

*Summary*

	Budget request	House action	Senate committee action
<b>Research and development:</b>			
Apollo.....	\$1,691,100,000	\$1,766,800,000	\$1,691,100,000
Space flight operations.....	225,627,000	354,827,000	225,627,000
Advanced missions.....	2,500,000	2,500,000	2,500,000
Physics and astronomy.....	117,600,000	112,600,000	117,600,000
Lunar and planetary exploration.....	138,800,000	131,800,000	138,800,000
Bioscience.....	20,400,000	27,400,000	20,400,000
Space applications.....	128,400,000	138,400,000	128,400,000
Launch vehicle procurement.....	112,600,000	114,200,000	112,600,000
Sustaining university program.....	9,000,000	9,000,000	9,000,000
Space vehicle systems.....	27,500,000	30,000,000	27,500,000
Electronics systems.....	33,550,000	35,000,000	33,550,000
Human factor systems.....	22,100,000	23,600,000	22,100,000
Basic research.....	20,250,000	21,400,000	20,250,000
Space power and electric propulsion systems.....	36,950,000	39,300,000	36,950,000
Nuclear rockets.....	36,500,000	50,000,000	50,000,000
Chemical propulsion.....	22,850,000	28,100,000	22,850,000
Aeronautical vehicles.....	77,700,000	80,900,000	77,700,000
Tracking and data acquisition.....	278,000,000	293,000,000	278,000,000
Technology utilization.....	5,000,000	5,000,000	5,000,000
<b>Total.....</b>	<b>3,006,427,000</b>	<b>3,264,427,000</b>	<b>3,019,927,000</b>
<b>Construction of facilities:</b>			
Electronics Research Center.....	8,088,000	8,088,000	8,088,000
Goddard Space Flight Center.....	670,000	670,000	670,000
John F. Kennedy Space Center.....	12,500,000	12,500,000	12,500,000
Langley Research Center.....	4,767,000	4,767,000	4,767,000
Manned Spacecraft Center.....	1,750,000	1,750,000	1,750,000
Wallops Station.....	500,000	500,000	500,000
Various locations.....	26,425,000	26,425,000	26,425,000
Facility planning and design.....	3,500,000	3,500,000	3,500,000
<b>Total.....</b>	<b>58,200,000</b>	<b>58,200,000</b>	<b>58,200,000</b>
<b>Research and program management.....</b>	<b>650,900,000</b>	<b>643,750,000</b>	<b>637,400,000</b>
<b>Grand total.....</b>	<b>3,715,527,000</b>	<b>3,966,377,000</b>	<b>3,715,527,000</b>

**PURPOSE OF THE BILL**

The purpose of this bill is to authorize appropriations totaling \$3,715,527,000 to the National Aeronautics and Space Administration for fiscal year 1970, as follows:

	Budget request	House action	Senate committee action
Research and development.....	\$3,006,427,000	3,264,427,000	3,019,927,000
Construction of facilities.....	58,200,000	58,200,000	58,200,000
Research and program management.....	650,900,000	643,750,000	637,400,000

**LEGISLATIVE HISTORY**

The fiscal year 1970 budget request for the National Aeronautics and Space Administration was introduced in the House under H.R. 4646 and in the Senate as S. 539. Subsequently an amendment to the original budget request was submitted by the incoming administration, and the fiscal year 1970 budget request was reintroduced in the House under H.R. 10251 and in the Senate as S. 1941. After holding hearings the House Committee on Science and Astronautics reported out a

clean bill, H.R. 11271, which was subsequently passed by the House after the addition of two amendments, neither of which affected the total monetary amount recommended by the committee.

Your committee held hearings on S. 1941 and it was determined that amendments were required. Your committee, therefore, has reported out H.R. 11271 with an amendment striking out all after the enacting clause and inserting the committee amendment.

### SUMMARY

The NASA budget request for fiscal year 1970 contains funds for 19 program items under research and development with an accumulative total of \$3,006,427,000, funds for construction of facilities with an accumulative total of \$58.2 million, and a research and program management budget totaling \$650,900,000. As a result of action by the House, research and development items were increased by \$258 million; no change was made by the House in construction of facilities; and a cut of \$7.15 million was made in research and program management. The total funds authorized for NASA by the House for fiscal year 1970 are \$3,966,377,000.

Your committee, after consideration of the bill, recommends an authorization totaling \$3,715,527,000, a reduction of \$250,850,000 from the amount authorized by the House. The authorization recommended by your committee is the same total amount as that requested in the President's revised budget and \$45 million less than the authorization requested in the President's original budget. The recommended authorization would provide \$3,019,927,000 for research and development, \$58.2 million for construction of facilities and \$637,400,000 for research and program management. The reasoning accompanying the action of your committee is contained in this summary or in the report under the various programs or items therein.

Your committee held hearings in connection with the NASA authorization request on April 28, 29, and 30, May 1, 6, and 9, 1969. On May 21 and June 24, 1969, the committee met in executive session to prepare its recommendations to the Senate and mark up the bill.

The total of \$3,715,527,000 which the committee is recommending represents the lowest total recommended by your committee since 1962, and one which is over \$435 million less than the total amount recommended by your committee in the last fiscal year.

It is your committee's considered judgment that the authorization which it recommends will provide funds for a reasonably paced program for manned exploration of the moon subsequent to the initial landing and for continuing a manned space program in earth orbit. While these programs provide minimal progress toward increasing the scientific, technical, and economic return on the Nation's investment in the space program, the authorization does include funds for continuing production of the Saturn V launch vehicle to insure that the Nation can continue into the future a scientifically effective program of manned lunar and near earth orbital space exploration. In this regard your committee was encouraged to note that the President has established a task group with the Vice President as chairman to carefully reevaluate the Nation's long-term goals and plans in space, including civilian and military, manned and unmanned.

The recommended authorization also includes funds for continuing an unmanned planetary exploration program initiated in prior years and to initiate a low-cost mission to the planet Mercury in 1973. Your committee is endorsing, and in fact is urging, expeditious pursuance of the administration's proposal to develop an earth resources technology satellite as the major component of its space applications program. Finally, authorization is also being provided for advanced research and technology activities, including a significant effort in aeronautical research and initiation of the development of a nuclear engine to provide advanced space propulsion capability for future national needs.

### RESEARCH AND DEVELOPMENT

#### Summary

	Budget request	House action	Senate committee action
Research and development:			
Apollo.....	\$1,691,100,000	\$1,766,800,000	\$1,691,100,000
Space flight operations.....	225,627,000	354,827,000	225,627,000
Advanced missions.....	2,500,000	2,500,000	2,500,000
Physics and astronomy.....	117,600,000	112,600,000	117,600,000
Lunar and planetary exploration.....	138,800,000	131,800,000	138,800,000
Bioscience.....	23,400,000	27,400,000	23,400,000
Space applications.....	128,400,000	138,400,000	128,400,000
Launch vehicle procurement.....	112,600,000	114,200,000	112,600,000
Sustaining university program.....	9,000,000	9,000,000	9,000,000
Space vehicle systems.....	27,500,000	30,000,000	27,500,000
Electronics systems.....	33,550,000	35,000,000	33,550,000
Human factor systems.....	22,100,000	23,600,000	22,100,000
Basic research.....	20,250,000	21,400,000	20,250,000
Space power and electric propulsion systems.....	36,950,000	39,900,000	36,950,000
Nuclear rockets.....	50,000,000	50,000,000	50,000,000
Chemical propulsion.....	22,850,000	28,100,000	22,850,000
Aeronautical vehicles.....	77,700,000	80,900,000	77,700,000
Tracking and data acquisition.....	278,000,000	293,000,000	278,000,000
Technology utilization.....	5,000,000	5,000,000	5,000,000
Total.....	3,006,427,000	3,264,427,000	3,019,927,000

#### APOLLO PROGRAM, \$1,691,100,000

As a result of its review of the Apollo program, your committee believes that the \$1,691,100,000 administration request for fiscal year 1970 is reasonable and realistic. This request is \$347,700,000 less than the administration request for fiscal year 1969. With success of the Apollo objective imminent, your committee agrees that attention should be given to the adequate funding for lunar exploration so that additional equipment required for exploring the moon after the first lunar landing, scheduled for July 1969, can be provided on a timely basis to provide program continuity.

The House approved a total of \$1,766,800,000 for Apollo, representing an increase of \$75,700,000 over the administration's request. This amount breaks down into a \$32.1 million increase for Saturn V, a \$39 million increase for operations, and a \$4.6 million increase for lunar exploration.

Your committee believes that these increases are not necessary at this time. The \$32.1 million increase for Saturn V approved by the House would be used for additional work leading to an improved J-2S engine. NASA testimony is that the J-2S engine is not needed in the Apollo mission. Development of the J-2S engine has been progressing using Apollo supporting development funds and sustaining engineering funds and that sufficient funds are available in fiscal year 1970 to continue the developmental work. The committee therefore does not agree with this action of the House.

The House approved an additional \$39 million for operations. Testimony by NASA has indicated that this money would only be needed should Apollo-11 not accomplish a lunar landing in July 1969, and therefore, Apollo launches could not be reduced in fiscal year 1970 from five to three. Your committee, taking note of the firm scheduling for the Apollo-11 lunar landing mission in July, and cognizant of NASA's reprogramming authority which is available should the schedule slip, does not agree to the action by the House.

The \$4.6 million addition to lunar exploration approved by the House would allow additional funds for a parallel space suit development program. The fiscal 1970 budget request has provided funds for space suit development and, therefore, your committee does not agree with the action of the House.

#### SPACE FLIGHT OPERATIONS PROGRAM, \$225,627,000

Your committee recommends that the NASA budget request of \$225,627,000 for space flight operation be approved. The House has approved a total of \$354,827,000 which is \$129,200,000 more than the NASA request. The House would restore \$57 million in Apollo applications which was cut from the original fiscal year 1970 budget request, add \$66 million to the Space Station budget request, and add \$6.2 million to the Saturn V Production request.

Your committee does not agree with the action taken by the House on Apollo applications. While the committee has always supported the objectives of Apollo applications, it recognizes the continued need to hold down funding for future programs and, therefore, feels that the \$251,800,000 NASA request for Apollo applications is sufficient funding at this time, all factors considered.

Your committee finds that the \$66 million added by the House for the Space Station is not necessary at this time. NASA testimony has indicated that requests for proposals for preliminary design and planning of a 12-man space station, including a space shuttle logistics system, were only issued on April 28, 1969, with proposals to be returned to NASA headquarters by June 9. Award of 11-month contracts to two firms to be selected to perform parallel cost-plus-fixed-fee studies is to be made by NASA after review of the proposals, a process which may require 2 or 3 months. With this schedule it is clear that the approximate completion of studies contracts will not occur until August 1970, and, therefore, the \$9 million budgeted for this program by NASA for fiscal year 1970 is sufficient.

Your committee further finds that the additional \$6.2 million for Saturn V Production is not necessary. The \$46 million budgeted by NASA will provide the initial funding for producing three follow-on Saturn V's; the additional \$6.2 million would simply provide for bringing into production one more additional follow-on Saturn V.

#### ADVANCED MISSIONS PROGRAM, \$2,500,000

#### PHYSICS AND ASTRONOMY PROGRAMS, \$117,600,000

It is the committee's view that the program balance between supporting research and flight activity has been a key factor responsible for the sustained scientific progress this Nation has made in space exploration during the past decade. The supporting research programs provide new knowledge for carrying out more efficient flight research and, perhaps more important, provide for research, program evaluation, and preliminary planning to establish the basic foundation and direction for future flight programs. Accordingly your committee does not agree with the House approved reduction of \$3 million in supporting research and technology funds for this program. Rather your committee recommends full authorization of the requested amount of \$19.6 million.

The House also recommended that the Physics and Astronomy Program be reduced by \$2 million through the elimination of two small scientific satellites and two small astronomy satellites proposed for initiation as a part of the Explorer project. It is your committee's view that the two astronomy satellites which will make key astronomy observations that cannot be performed from the earth are important to NASA's overall astronomy program. It is also noted that these two satellites have been strongly endorsed by NASA's Astronomy Mission Board. The two small scientific satellites which are to make atmospheric and magnetospheric observations are the major elements of a study of the atmosphere, the environment and the magnetosphere of the earth. These relatively inexpensive satellites will assume the major role of studying the environments previously investigated with the large, more complex Orbiting Geophysical Observatory satellites which are being discontinued. Accordingly your committee recommends an authorization of \$24 million for the Explorer project, which is the amount requested in the amended NASA budget.

## LUNAR AND PLANETARY EXPLORATION PROGRAM, \$138,800,000

As noted previously under the Physics and Astronomy Program, your committee believes that the balance between supporting research and flight activity has been a key factor responsible for our progress in space exploration. Particularly significant to your committee this year, however, was the testimony that without the full request for supporting research and technology funds, NASA would not be able to fully support the scientific activities associated with the lunar exploration program recommended as a follow-up to the initial lunar landing. Accordingly your committee does not agree with the House reduction of \$4 million in this supporting research and technology request and recommends the full amount of \$24.6 million for this part of the lunar and planetary program.

The House is recommending deferral of the \$3 million funding request for the initial increment of the Mariner-Mercury 1973 mission. Although a Mariner-Mercury flight could be undertaken in 1975, the testimony before your committee is very clear that such a deferral of the project would contribute to increasing the cost of the total program. The position of the planets in 1975 would require the design and development of a larger midcourse propulsion system whereas an existing system is planned for use in the 1973 mission. Moreover, the 1973 launch to Mercury is expected to yield knowledge of this one remaining unexplored terrestrial planet which could be a significant aid in the planning of a productive future planetary program. Accordingly, your committee believes that the authorization request of \$3 million should be provided in order to permit the initial preparations for a Mariner-Mercury flight in 1973.

The net effect of your committee's action is to recommend \$138,860,000 for the lunar and planetary program, an amount equal to the administration request and \$7 million above the House approved amount.

## BIOSCIENCE PROGRAM, \$20,400,000

Your committee noted reduction of the biosatellite flight project with the cancellation, during fiscal year 1969, of the two 21-day missions and the second 30-day mission. More important, the committee noted that the objectives of this program have been under review for several months and that NASA has recently requested the National Academy of Sciences to undertake a study of the program objectives. The results of the Academy study will not be available until later this year. In view of these developments your committee agrees with the amended budget proposal to cancel the second 30-day mission before any significant investment is made, and it supports funding at the requested level for supporting research and technology to establish the base for future bio-science investigations. Accordingly your committee recommends the restoration of the House reduction of \$5 million in supporting research and technology, and deletion of the \$12

million the House added for continuation of the biosatellite flight project. This action results in a program total of \$20.4 million, an amount identical to the NASA request and \$7 million below the amount approved by the House.

## SPACE APPLICATIONS PROGRAM, \$128,400,000

Your committee gave special attention to the earth resources survey project during its hearings on the fiscal year 1970 budget because of the great potential this program holds for the future benefit of mankind. Testimony was heard from NASA witnesses as well as from several of the proposed user agencies such as the Departments of Interior and Agriculture, and the Environmental Science Services Administration of the Department of Commerce. Each of the witnesses expressed confidence in the program and appeared to be satisfied that NASA is aggressively pursuing the development of an earth resources technology satellite.

During its consideration of the authorization request, the House added \$10 million to the project with the recommendation that the launch schedule for an earth resources technology satellite be compressed if possible, and that plans for additional spacecraft should be made. Your committee fully agrees with the House-expressed view that this highly promising program should be moved ahead as quickly as practicable. However, the testimony of NASA witnesses states that an additional \$10 million would not do more than provide some added insurance that the present schedule would be attained. Also, your committee notes that the budget request of \$25.1 million for the earth resources survey project, which includes \$14.1 million for an earth resources technology satellite, represents an authorization that is more than double that allocated last year. Accordingly, your committee recommends an authorization of \$25.1 million for the earth resources project as requested by NASA.

## LAUNCH VEHICLE PROCUREMENT PROGRAM, \$112,600,000

Your committee recommends an authorization of \$112.6 million for launch vehicle procurement. This amount is equal to the NASA budget request but \$1.6 million less than the amount contained in the House authorization bill. The additional amount recommended by the House relates to the procurement of a Delta launch vehicle for the biosatellite F mission proposed for reinstatement by the House. Your committee agrees with the NASA amended budget request which proposes cancellation of the biosatellite F mission and, therefore, the funding for a launch vehicle for this mission is not required.

## SUSTAINING UNIVERSITY PROGRAM, \$9,000,000

## SPACE VEHICLE SYSTEMS PROGRAM, \$27,500,000

The original budget request for this item, submitted in January, was for \$30 million, the same amount as approved by the House. As a result of its review, the new administration reduced the amount requested to \$27,500,000. This amount was obtained by small reductions in each subcategory and not at the expense of any one activity.

Your committee concurs that the program can be carried out successfully at the lower figure.

## ELECTRONICS SYSTEMS PROGRAMS, \$33,550,000

The original budget request of this item, submitted in January, was for \$35 million, the same amount as approved by the House. During its review, the new administration amended the amount requested for this program to \$33,550,000, a reduction of \$1,450,000.

Your committee believes that this program can be conducted in a satisfactory manner at the reduced level of funding.

## HUMAN FACTOR SYSTEMS PROGRAM, \$22,100,000

The original budget for this item was \$23,600,000, the same amount as approved by the House in its action on the NASA authorization request.

The new administration reduced the amount to \$22,100,000 by subtracting \$1,500,000 from supporting research and technology, but leaving the biotechnology flight projects unchanged.

Your committee has reviewed this request and concurs that the program can be accomplished successfully for \$22,100,000.

## BASIC RESEARCH PROGRAM, \$20,250,000

The original budget request for this item was for \$21,400,000. A subsequent review and amendment by the new administration reduced the request to \$20,250,000. The House approved \$21,400,000 for this program.

As a result of its review, your committee concurs that the program for fiscal year 1970 can be accomplished at the reduced budget level.

SPACE POWER AND ELECTRIC PROPULSION SYSTEMS PROGRAM.  
\$36,950,000

The original budget request for this program was for \$39,900,000, the same amount as approved by the House.

The new administration amended the request to \$36,950,000 by subtracting \$2,950,000 from supporting research and technology. The amount for the space electric rocket test (SERT) was not changed. A subitem within supporting research and technology for \$5 million for the continuation of development on the SNAP 8 was also left unchanged.

As a result of its review, your committee concurs that the program can be carried out successfully for \$36,950,000.

## NUCLEAR ROCKETS PROGRAM, \$50,000,000

The original budget request for this item, submitted in January, was for \$36,500,000. The new administration, in reviewing this request, recommended no change.

The House Committee on Science and Astronautics, taking into consideration the great improvements in space propulsion that will be brought about by the NERVA nuclear engine, and in an effort to provide a greater assurance of meeting the present schedule of delivering a flight ready engine in late 1976, added \$13.5 million to this program bringing the total to \$50 million. The House subsequently approved this recommendation. It should be noted that this is still \$5 million less than the authorization provided in fiscal year 1969.

The superiority of nuclear engines over even the most advanced chemical engines has been known for many years, but the technical difficulties appeared formidable. The many thousands of hours of testing required to prove reliability of subsystems has necessarily made the development program longer and more costly than less ambitious and less promising programs. However, an almost unbroken string of brilliant successes in the testing program has solved all of the major technical problems and brought the project to the point where development of a flight ready engine and upper stage should begin.

Because of its enormous potential, your committee has strongly supported this program in the past and, as in previous years, a special effort was made to obtain comprehensive testimony from expert witnesses regarding results of recent tests, availability of manpower, and schedules for future development. As a result of its current review of the program, your committee believes that a modest addition to the NERVA budget will help to assure the availability of the engine by 1976, and that availability of this advanced capability by that date will be in the best interests of the United States. Optimum scheduling for the NERVA engine development program dictated that this action should have been initiated in fiscal year 1969 in order to provide orderly transition from and continuity with the technology program. However, engine development was not initiated due to funding constraints, and, therefore, it becomes imperative to begin engine development this year or the capability to do so will be lost and very expensive to regain. Your committee, therefore, believes that the additional \$13.5 million will permit recovery of some of the momentum in program execution that was lost by the deferral of the start of the engine development from fiscal year 1969 and provide a solid foundation for proceeding with the program.

Accordingly, your committee concurs with the House and recommends \$50 million for the Nuclear Rockets Program.

Your committee recognizes the need for modifying test stand ETS-1 at the Nuclear Rocket Development Station to accommodate the development testing of the NERVA engine. In conjunction with the testimony on this modification, it was stated that the design work, initiated in fiscal year 1969, and the actual modification, to be initiated in fiscal year 1970, is to be funded, after discussions within NASA relative to its propriety, from research and development funds. Your committee is not convinced of the correctness of this decision, and therefore requests that NASA undertake a further review as to the proper classification of this work to assure consistent treatment in accordance with accepted principles, and provide for appropriate adjustment between authorization categories as may be indicated by such review.

#### CHEMICAL PROPULSION PROGRAM, \$22,850,000

The original budget request of \$25,100,000 for the chemical propulsion program was amended by the new administration to a revised total of \$22,850,000, a reduction of \$2,250,000.

The House Committee on Science and Astronautics increased the amount for this program \$5,250,000 above the revised request; \$2.25 million of this amount was for program supporting research and technology and \$3 million was added to recommence work on the large solid rocket motor project, making a program total of \$28,100,000. This amount was approved by the House.

Your committee noted that no consideration was given to funds for reinitiation of the large solid rocket motor project by either the outgoing or incoming administrations inasmuch as this project had met most of its research objectives and was terminated in fiscal year 1968. In addition, witnesses testified before the committee that funds to accomplish the few tasks remaining to establish large solid rocket motor technology are included in the present budget request in the category of supporting research and technology.

In view of the foregoing, your committee believes that the objectives of the chemical propulsion program—including the few remaining tasks to establish large solid rocket motor technology—can be accomplished at the requested level of \$22,850,000.

#### AERONAUTICAL VEHICLES PROGRAM, \$77,700,000

The initial budget request for this program was \$78,900,000; however, the new administration submitted an amendment reducing the amount to \$77,700,000 by subtracting \$400,000 from V/STOL aircraft technology and \$800,000 from hypersonic aircraft technology. All other subcategories were left unchanged.

The House Committee on Science and Astronautics recommended a program total of \$80,900,000, or \$5.25 million above the amended request. The addition would support added work in structural analysis, V/STOL propulsion and noise, and aircraft operations research. The

House approved the committee's recommendation in its action on the NASA authorization bill.

Your committee has reviewed this request as well as the action of the House and believes that at the present time, the \$77,700,000 is minimally adequate, keeping in mind that a total of \$185.6 million has been identified as the amount which represents the total NASA effort in aircraft technology.

This \$185.6 million is an improvement over the \$172.9 so identified in last year's budget. However, this still represents less than 4 percent of the total NASA budget and the committee has long questioned whether this level of effort was adequate for NASA to fill its heavy responsibilities in this area.

In 1965 the committee requested the Science Policy Division of the Legislative Reference Service, Library of Congress, to conduct a comprehensive study on the subject of aeronautical R. & D. policy. That study, entitled "Policy Planning for Aeronautical Research and Development," was completed and published in May 1966, as Senate Document No. 90, 89th Congress, 2d session. In January and February of 1967, the committee held hearings on this subject and on January 31, 1968, filed a report with the Senate ("Aeronautical Research and Development Policy," S. Rept. No. 957, 90th Cong. 2d sess.).

One of the conclusions arrived at by the committee was that all the experts seemed to agree that more aeronautical R. & D. ought to be done, but there was a wide divergence of views on what and how much should be done, who should do it, and who should pay for it. Furthermore, no one was able to relate the level of R. & D. effort to the ultimate benefits that accrue to the society from a healthy aviation transportation system.

As a result, one of the most important recommendations of the committee was that the National Aeronautics and Space Administration and the Department of Transportation should jointly undertake an indepth study in order to try to determine the level of effort of aeronautical R. & D. that should be maintained.

Last year, the National Aeronautics and Space Council considered this matter and tentative steps were taken by NASA and DOT to initiate such a study.

In testimony before the committee this year, NASA testified that an agreement had been reached with the DOT and submitted to the committee the text of the agreement and a detailed outline of the study. While the study will require 18 months to complete, and its results will probably not affect the budget until fiscal year 1972, your committee is gratified that this important study has begun and with apparently a sufficient enough commitment on the part of the agencies involved to insure that a thorough job will be done.

More recently, the Vice President, as Chairman of the National Aeronautics and Space Council, has also assured the committee that the Council will continue to give this matter its high priority consideration and will—as recommended by your committee—fulfill its responsibilities in implementing the recommendations of the joint study when they are made. In the meantime, your committee feels that it is unnecessary to add small amounts to the aeronautical vehicles program budget until a more rational basis is established for the allocation of such increases.

Your committee will continue to monitor the progress in this area and report to the Senate as appropriate.

TRACKING AND DATA ACQUISITION PROGRAM, \$278,000,000

Your committee recommends an authorization of \$278 million for the tracking and data acquisition program, the amount requested by the administration. The House approved \$293 million for this program, an increase of \$15 million.

The original budget request for the program was \$298 million; a budget amendment reduced that amount by \$20 million.

The fiscal year 1970 budget request for the Apollo program is based on the assumption that the first manned lunar landing will be achieved with the Apollo 11 mission this summer and that subsequent lunar exploration flights will then proceed at a rate of about three per year. Testimony before your committee states that because of this anticipated reduction in the launch density of the Apollo launch schedule and because of some deferrals and cancellations in the unmanned space flight programs, the budget amount requested for the tracking and data acquisition program can provide a proper level of support.

The budget request for this program is based on continuing the current but constrained level of support for the tracking and data acquisition function. It is a stringent budget and will require a reduced level of support for certain still-active and scientifically interesting satellites. However, in these times of austere budgets, compromises must be made and your committee believes that additional authorization over and above the President's request need not be made available. Moreover, your committee agrees with the thought expressed by the House committee in its report that NASA impose stricter discipline over the amount of data collected from satellites active for long periods of time.

TECHNOLOGY UTILIZATION PROGRAM, \$5,000,000

CONSTRUCTION OF FACILITIES

Summary

	Budget request	House action	Senate committee action
A. Electronics Research Center.....	\$8,088,000	\$8,088,000	\$8,088,000
B. Goddard Space Flight Center.....	670,000	670,000	670,000
C. John F. Kennedy Space Center.....	12,500,000	12,500,000	12,500,000
D. Langley Research Center.....	4,767,000	4,767,000	4,767,000
E. Manned Spacecraft Center.....	1,750,000	1,750,000	1,750,000
F. Wallops Station.....	500,000	500,000	500,000
G. Various locations.....	26,425,000	26,425,000	26,425,000
H. Facility planning and design.....	3,500,000	3,500,000	3,500,000
Total.....	58,200,000	58,200,000	58,200,000

It had been the committee's understanding, both from the way that NASA presents its construction of facilities budget, from the testimony of NASA officials, and from published NASA management directives that the amounts requested for major facilities would provide for completely operable facilities. For example, an office building would have all the required furniture, a laboratory, the required laboratory equipment, and a computer complex would have the necessary computers.

However, the committee has learned recently that NASA's authorization budget for the construction of facilities does not necessarily include all the costs required to construct and equip a completely operable facility. Moreover, NASA does not advise the committee how much, if any, additional costs are required to make such facilities operable unless specific inquiries are made. In certain instances NASA used research and development or administrative operations appropriation funds to procure the necessary equipment to make the facilities completely operable. These actions were taken by NASA without benefit of the fund transfer authority available in the Authorization Act.

During this year's authorization hearings, the committee learned for the first time that the cost of the Lunar Receiving Laboratory at the Manned Spacecraft Center, Houston, which was originally authorized in fiscal year 1967 for \$8.1 million, is now being completed at a total cost of approximately \$16 million. It appears that overruns in the original estimates for both construction and equipment were experienced, causing the \$8 million increase, with most of the equipment procured with R. & D. funds.

The committee was led to believe at the time of the fiscal year 1967 authorization hearings that the \$8.1 million authorization would include the equipment needed for the facility and that the committee had not since been made aware that substantial amounts of R. & D. funds would be needed or used to procure the equipment required for the facility.

The committee believes there is a need for NASA to keep the committee advised of the total costs of its facility projects, including the cost of all required equipment. Accordingly, the committee requests that each authorization request presented to this committee for a construction of facilities project should include the total estimated costs necessary to provide for a completely operable facility, as defined in "NASA's Management Handbook," 7330-1. In the event such total estimated cost of any authorized facility is increased by more than 5 percent, NASA is requested to promptly advise the committee.

The committee also requests that NASA furnish a report to the committee as of March 1 of each year showing, as of the preceding December 31, the status of each project authorized to be constructed in prior years. The report should show the name of each facility authorized but not yet completed, the current estimated cost to complete, estimated completion date, and any other pertinent information necessary to keep the committee informed as to the project status. When a project is completed it will be so reported and thereafter need not be included in this report.

In a closely related matter involving the acquisition of facilities, the committee is disturbed by the interpretations applied within NASA to provisions of the Authorization Act and the procedures adopted for classifying items of work which permitted, without the committee's knowledge, the construction of a neutral buoyancy facility at the Marshall Space Flight Center at an estimated cost of \$1,069,000, thereby adding a new capability to that Center. It is your committee's judgment that, generally speaking, facilities represent capabilities, and therefore, it is the committee's desire to be fully informed by NASA whenever new or expanded capabilities are proposed whether in the form of new facilities, or in the form of expansion or modification of existing facilities.

## RESEARCH AND PROGRAM MANAGEMENT

### Summary

Object classification	Budget request	House action	Senate committee action
Personnel compensation.....	\$433,723,000		
Personnel benefits.....	32,951,000		
Travel and transportation of persons.....	16,339,000		
Transportation of things.....	3,987,000		
Rent, communications, and utilities.....	46,963,000		
Printing and reproduction.....	6,342,000		
Other services.....	90,697,000		
Supplies and materials.....	15,768,000		
Equipment.....	2,849,000		
Leads and structures.....	1,153,000		
Grants, subsidies, and contributions.....	92,000		
Insurance claims and indemnities.....	36,000		
Total.....	650,900,000	\$643,750,000	\$637,400,000

The committee continues to be concerned with the growth in the research and program management budget in view of the leveling and relative stabilization of the agency program which should provide opportunities for personnel economies.

The committee has taken cognizance of the existence of several vacancies in key positions and trusts that the Administrator will utilize this opportunity to undertake a comprehensive examination of the headquarters structure with the objective of organizing to achieve the most effective utilization of personnel.

The committee notes NASA's plan for increasing the launch interval following successful achievement of the lunar landing objective and the projected reductions in research and development operational expenses resulting therefrom. The committee views this plan as an appropriate management action and expects that similar management attention will be given to reviewing and reducing research and program management personnel (whether direct or contractor employees) and related costs as a result of this change in operational scheduling.

The committee further expects the Administrator, in conjunction with DOD management, will expedite the review of support activities of both agencies at Cape Kennedy and implement those consolidations of functions or other actions which will produce economies in space launch activities.

If the above measures are taken, your committee believes that the funding requirements for research and program management can be reduced in fiscal year 1970. Accordingly your committee recommends an authorization of \$637.4 million for the research and program management appropriation, a reduction of \$13.5 million from the requested amount.

### LEGISLATIVE CHANGES

Your committee has adopted an amendment to section 1 designated as subsection (h) which was proposed by Senator Curtis. The language would bar the use of any funds appropriated pursuant to the fiscal year 1970 authorization for the payment of grants by NASA to universities which prohibit the recruiting of military personnel unless the Administrator found that to not continue a project with such university would have a significant adverse effect to the aeronautics and space program. The language is identical to language contained in the fiscal year 1969 Authorization Act.

The House approved four legislative amendments which had not been included in the administration's fiscal year 1970 budget request for NASA. Without expressing agreement or disagreement with respect to the philosophy espoused in these amendments, your committee has not included them in its recommended amendment to the House bill recognizing the fact that these amendments will be in conference and subject to further consideration by the conferees.

NASA AUTHORIZATION OF APPROPRIATIONS FOR  
FISCAL YEAR 1970

NOVEMBER 6, 1969.—Ordered to be printed

Mr. MILLER of California, from the committee of conference, submitted the following

CONFERENCE REPORT

[To accompany H. R. 11271]

The committee of conference on the disagreeing votes of the two Houses on the amendment of the Senate to the bill (H.R. 11271) to authorize appropriations to the National Aeronautics and Space Administration for research and development, construction of facilities, and research and program management, and for other purposes, having met, after full and free conference, have agreed to recommend and do recommend to their respective Houses as follows:

That the House recede from its disagreement to the amendment of the Senate and agree to the same with an amendment as follows:

In lieu of the matter proposed to be inserted by the Senate amendment insert the following: *That there is hereby authorized to be appropriated to the National Aeronautics and Space Administration:*

- (a) For "Research and development," for the following programs:
- (1) Apollo, \$1,691,100,000;
  - (2) Space flight operations, \$225,627,000;
  - (3) Advanced missions, \$2,500,000;
  - (4) Physics and astronomy, \$117,600,000;
  - (5) Lunar and planetary exploration, \$138,800,000;
  - (6) Bioscience, \$20,400,000;
  - (7) Space applications, \$128,400,000;
  - (8) Launch vehicle procurement, \$112,600,000;
  - (9) Sustaining university program, \$9,000,000;
  - (10) Space vehicle systems, \$27,500,000;
  - (11) Electronics systems, \$33,550,000;
  - (12) Human factor systems, \$22,100,000;
  - (13) Basic research, \$20,250,000;
  - (14) Space power and electric propulsion systems, \$36,950,000;

- (15) Nuclear rockets, \$50,000,000;
- (16) Chemical propulsion, \$22,850,000;
- (17) Aeronautical vehicles, \$77,700,000;
- (18) Tracking and data acquisition, \$278,000,000;
- (19) Technology utilization, \$5,000,000.

(b) For "Construction of facilities," including land acquisitions, as follows:

- (1) Electronics Research Center, Cambridge, Massachusetts, \$8,088,000;
- (2) Goddard Space Flight Center, Greenbelt, Maryland, \$670,000;
- (3) John F. Kennedy Space Center, NASA, Kennedy Space Center, Florida, \$12,500,000;
- (4) Langley Research Center, Hampton, Virginia, \$4,767,000;
- (5) Manned Spacecraft Center, Houston, Texas, \$1,750,000;
- (6) Wallops Station, Wallops Island, Virginia, \$500,000;
- (7) Various locations, \$26,425,000;
- (8) Facility planning and design not otherwise provided for, \$3,500,000.

(c) For "Research and program management," \$637,400,000.

(d) Appropriations for "Research and development" may be used (1) for any items of a capital nature (other than acquisition of land) which may be required for the performance of research and development contracts, and (2) for grants to nonprofit institutions of higher education, or to nonprofit organizations whose primary purpose is the conduct of scientific research, for purchase or construction of additional research facilities; and title to such facilities shall be vested in the United States unless the Administrator determines that the national program of aeronautical and space activities will best be served by vesting title in any such grantee institution or organization. Each such grant shall be made under such conditions as the Administrator shall determine to be required to insure that the United States will receive therefrom benefit adequate to justify the making of that grant. None of the funds appropriated for "Research and development" pursuant to this Act may be used for construction of any major facility, the estimated cost of which, including collateral equipment, exceeds \$250,000, unless the Administrator or his designee has notified the Speaker of the House of Representatives and the President of the Senate and the Committee on Science and Astronautics of the House of Representatives and the Committee on Aeronautical and Space Sciences of the Senate of the nature, location, and estimated cost of such facility.

(e) When so specified in an appropriation Act, (1) any amount appropriated for "Research and development" or for "Construction of facilities" may remain available without fiscal year limitation, and (2) maintenance and operation of facilities, and support services contracts may be entered into under the "Research and program management" appropriation for periods not in excess of twelve months beginning at any time during the fiscal year.

(f) Appropriations made pursuant to subsection 1(c) may be used, but not to exceed \$35,000, for scientific consultations or extraordinary

expenses upon the approval or authority of the Administrator and his determination shall be final and conclusive upon the accounting officers of the Government.

(g) No part of the funds appropriated pursuant to subsection 1(c) for maintenance, repairs, alterations, and minor construction shall be used for the construction of any new facility the estimated cost of which, including collateral equipment, exceeds \$100,000.

(h) No part of the funds appropriated pursuant to subsection (a) of this section may be used for grants to any nonprofit institution of higher learning unless the Administrator or his designee determines at the time of the grant that recruiting personnel of any of the Armed Forces of the United States are not being barred from the premises or property of such institution except that this subsection shall not apply if the Administrator or his designee determines that the grant is a continuation or renewal of a previous grant to such institution which is likely to make a significant contribution to the aeronautical and space activities of the United States. The Secretary of Defense shall furnish to the Administrator or his designee within sixty days after the date of enactment of this Act and each January 30 and June 30 thereafter the names of any nonprofit institutions of higher learning which the Secretary of Defense determines on the date of each such report are barring such recruiting personnel from premises or property of any such institution.

(i) Notwithstanding any other provision of law, authorizations to the National Aeronautics and Space Administration, enacted for fiscal years 1967, 1968, and 1969, for which appropriations have not been made, totaling \$327,070,000, are hereby canceled, effective June 30, 1969, or the date of this Act, whichever is later.

SEC. 2. Authorization is hereby granted whereby any of the amounts prescribed in paragraphs (1), (2), (3), (4), (5), (6), and (7) of subsection 1(b) may, in the discretion of the Administrator of the National Aeronautics and Space Administration, be varied upward 5 per centum to meet unusual cost variations, but the total cost of all work authorized under such paragraphs shall not exceed the total of the amounts specified in such paragraphs.

SEC. 3. Not to exceed one-half of 1 per centum of the funds appropriated pursuant to subsection 1(a) hereof may be transferred to the "Construction of facilities" appropriation, and, when so transferred, together with \$10,000,000 of the funds appropriated pursuant to subsection 1(b) hereof (other than funds appropriated pursuant to paragraph (8) of such subsection) shall be available for expenditure to construct, expand, or modify laboratories and other installations at any location (including locations specified in subsection 1(b)), if (1) the Administrator determines such action to be necessary because of changes in the national program of aeronautical and space activities or new scientific or engineering developments, and (2) he determines that deferral of such action until the enactment of the next authorization Act would be inconsistent with the interest of the Nation in aeronautical and space activities. The funds so made available may be expended to acquire, construct, convert, rehabilitate, or install permanent or temporary public works, including land acquisition, site preparation, appurtenances, utilities, and equipment. No portion of such sums may be obligated for expenditure or expended to construct, expand, or modify laboratories and other installations unless (A) a period of thirty days has passed after the Administrator or his designee has

transmitted to the Speaker of the House of Representatives and to the President of the Senate and to the Committee on Science and Astronautics of the House of Representatives and to the Committee on Aeronautical and Space Sciences of the Senate a written report containing a full and complete statement concerning (1) the nature of such construction, expansion, or modification, (2) the cost thereof including the cost of any real estate action pertaining thereto, and (3) the reason why such construction, expansion, or modification is necessary in the national interest, or (B) each such committee before the expiration of such period has transmitted to the Administrator written notice to the effect that such committee has no objection to the proposed action.

SEC. 4. Notwithstanding any other provision of this Act—

(1) no amount appropriated pursuant to this Act may be used for any program deleted by the Congress from requests as originally made to either the House Committee on Science and Astronautics or the Senate Committee on Aeronautical and Space Sciences,

(2) no amount appropriated pursuant to this Act may be used for any program in excess of the amount actually authorized for that particular program by sections 1(a) and 1(c), and

(3) no amount appropriated pursuant to this Act may be used for any program which has not been presented to or requested of either such committee,

unless (A) a period of thirty days has passed after the receipt by the Speaker of the House of Representatives and the President of the Senate and each such committee of notice given by the Administrator or his designee containing a full and complete statement of the action proposed to be taken and the facts and circumstances relied upon in support of such proposed action, or (B) each such committee before the expiration of such period has transmitted to the Administrator written notice to the effect that such committee has no objection to the proposed action.

SEC. 5. It is the sense of the Congress that it is in the national interest that consideration be given to geographical distribution of Federal research funds whenever feasible, and that the National Aeronautics and Space Administration should explore ways and means of distributing its research and development funds whenever feasible.

SEC. 6. (a) As used in this section—

(1) The term "aerospace contractor" means any individual, firm, corporation, partnership, association, or other legal entity, which provides services and materials to or for the National Aeronautics and Space Administration in connection with any aerospace system.

(2) The term "services and materials" means either services or materials or services and materials which are provided as a part of or in connection with any aerospace system.

(3) The term "aerospace system" includes, but is not limited to, any rocket, launch vehicle, rocket engine, propellant, spacecraft, command module, service module, landing module, tracking device, communications device, or any part or component thereof, which is used in either manned or unmanned spaceflight operations.

(b) Any former employee of the National Aeronautics and Space Administration who at any time during the five-year period immediately preceding his termination of employment with the National Aeronautics and Space Administration was directly engaged in the

procurement of any aerospace system or directly engaged in the negotiation, renegotiation, approval, or disapproval of any contract for the procurement of services or materials for or in connection with any aerospace system; or who served during the five-year period immediately preceding his termination of employment with the National Aeronautics and Space Administration at the factory or plant of an aerospace contractor in connection with work performed by such contractor or any aerospace system; or who was employed by the National Aeronautics and Space Administration during the five-year period preceding the termination of his employment at an annual salary rate of GS-15 or higher, and who

(1) was employed for any period of time during any calendar year by an aerospace contractor,

(2) represented any aerospace contractor during any calendar year at any hearing, trial, appeal, or other action in which the United States was a party and which involved services and materials provided or to be provided to the United States by such contractor, or

(3) represented any such contractor in any transaction with the National Aeronautics and Space Administration involving services or materials provided or to be provided by such contractor to the National Aeronautics and Space Administration, shall file with the Administrator, in such form and manner as the Administrator may prescribe, not later than March 1 of the next succeeding calendar year, a report containing the following information:

(1) His name and address.

(2) The name and address of the aerospace contractor by whom he was employed or whom he represented.

(3) The title of the position held by him with the aerospace contractor.

(4) A brief description of his duties with the aerospace contractor.

(5) A brief description of his duties while employed by the National Aeronautics and Space Administration during the three-year period immediately preceding his termination of employment.

(6) A description of any work performed by him in connection with any aerospace system while employed by the National Aeronautics and Space Administration, if the aerospace contractor by whom he is employed is providing substantial services or materials for such aerospace system, or is negotiating or bidding to provide substantial services or materials for such aerospace system.

(7) The date of the termination of his employment with the National Aeronautics and Space Administration, and the date on which his employment with the aerospace contractor began and if no longer employed by such aerospace contractor, the date on which his employment with such aerospace contractor terminated.

(8) Such other pertinent information as the Administrator may require.

(c) Any employee of the National Aeronautics and Space Administration who was previously employed by an aerospace contractor in any calendar year and—

(1) who is directly engaged in the procurement of any aerospace system or is directly engaged in the negotiation, renegotiation, approval, or disapproval of any contract for the procurement of services or materials for or in connection with any aerospace system, or

(2) who is serving or has served as a representative of the National Aeronautics and Space Administration at the factory or plant of an aerospace contractor in connection with work being performed by such contractor on any aerospace system, shall file with the Administrator, in such form and manner as the Administrator may prescribe, not later than March 1 of the next succeeding calendar year, a report containing the following information:

(1) His name and address.

(2) The title of his position with the National Aeronautics and Space Administration.

(3) A brief description of his duties with the National Aeronautics and Space Administration.

(4) The name and address of the aerospace contractor by whom he was employed.

(5) The title of his position with such aerospace contractor.

(6) A brief description of his duties at the time he was employed by such aerospace contractor.

(7) A description of any work performed by him in connection with any aerospace system while he was employed by the aerospace contractor or while performing any legal services for such contractor, if such contractor is providing substantial services or materials for such aerospace system or is negotiating or bidding to provide substantial services or materials for such aerospace system.

(8) The date on which his employment with such contractor terminated and the date on which his employment with the National Aeronautics and Space Administration began thereafter.

(9) Such other pertinent information as the Administrator may require.

(d)(1) No former employee of the National Aeronautics and Space Administration shall be required to file a report under this section for any year in which he was employed by an aerospace contractor if the total cost to the United States of services and materials provided the United States by such contractor during such year was less than \$10,000,000; and no employee of the National Aeronautics and Space Administration shall be required to file a report under this section if the total cost to the United States of services and materials provided the United States by the aerospace contractor by whom such employee was employed was less than \$10,000,000 in each of the applicable calendar years that he was employed by such contractor.

(2) No former National Aeronautics and Space Administration employee shall be required to file a report under this section for any

calendar year on account of employment with the National Aeronautics and Space Administration if such active duty or employment was terminated three years or more prior to the beginning of such calendar year; and no employee of the National Aeronautics and Space Administration shall be required to file a report under this section for any calendar year on account of employment with or services performed for an aerospace contractor if such employment was terminated or such services were performed three years or more prior to the beginning of such calendar year.

(e) The Administrator shall, not later than May 1 of each year, file with the President of the Senate and the Speaker of the House of Representatives a report containing a list of the names of persons who have filed reports with him for the preceding calendar year pursuant to subsections (b) and (c) of this section. The Administrator shall include after each name so much information as he deems appropriate, and shall list the names of such persons under the aerospace contractor for whom they worked or for whom they performed services.

(f) Any former employee of the National Aeronautics and Space Administration whose employment with an aerospace contractor terminated during any calendar year shall be required to file a report pursuant to subsection (b) of this section for such year if he would otherwise be required to file under such subsection; and any person whose employment with the National Aeronautics and Space Administration terminated during any calendar year shall be required to file a report pursuant to subsection (c) of this section for such year if he would otherwise be required to file under such subsection.

(g) The Administrator shall maintain a file containing the information filed with him pursuant to subsections (b) and (c) of this section and such file shall be open for public inspection at all times during the regular workday.

(h) Any person who fails to comply with the filing requirements of this section shall be guilty of a misdemeanor and shall, upon conviction thereof, be punished by not more than six months in prison or a fine of not more than \$1,000, or both.

(i) No person shall be required to file a report pursuant to this section for any year prior to the calendar year 1970.

SEC. 7. (a) If an institution of higher education determines, after affording notice and opportunity for hearing to an individual attending, or employed by, such institution, that such individual has been convicted by any court of record of any crime which was committed after the date of enactment of this Act and which involved the use of (or assistance to others in the use of) force, disruption, or the seizure of property under control of any institution of higher education to prevent officials or students in such institution from engaging in their duties or pursuing their studies, and that such crime was of a serious nature and contributed to a substantial disruption of the administration of the institution with respect to which such crime was committed, then the institution which such individual attends, or is employed by, shall deny for a period of two years any further payment to, or for the direct benefit of, such individual under any of the programs authorized by the National Aeronautics and Space Act of 1958, the funds for which are authorized pursuant to this Act. If an institution denies an individual assistance under the authority of the preceding

sentence of this subsection, then any institution which such individual subsequently attends shall deny for the remainder of the two-year period any further payment to, or for the direct benefit of, such individual under any of the programs authorized by the National Aeronautics and Space Act of 1958, the funds for which are authorized pursuant to this Act.

(b) If an institution of higher education determines, after affording notice and opportunity for hearing to an individual attending, or employed by, such institution, that such individual has willfully refused to obey a lawful regulation or order of such institution after the date of enactment of this Act, and that such refusal was of a serious nature and contributed to a substantial disruption of the administration of such institution, then such institution shall deny, for a period of two years, any further payment to, or for the direct benefit of, such individual under any of the programs authorized by the National Aeronautics and Space Act of 1958, the funds for which are authorized pursuant to this Act.

(c) (1) Nothing in this Act shall be construed to prohibit any institution of higher education from refusing to award, continue, or extend any financial assistance under any such Act to any individual because of any misconduct which in its judgment bears adversely on his fitness for such assistance.

(2) Nothing in this section shall be construed as limiting or prejudicing the rights and prerogatives of any institution of higher education to institute and carry out an independent, disciplinary proceeding pursuant to existing authority, practice, and law.

(3) Nothing in this section shall be construed to limit the freedom of any student to verbal expression of individual views or opinions.

SEC. 8. The flag of the United States, and no other flag, shall be implanted or otherwise placed on the surface of the moon, or on the surface of any planet, by the members of the crew of any spacecraft making a lunar or planetary landing as a part of a mission under the Apollo program or as a part of a mission under any subsequent program, the funds for which are provided entirely by the Government of the United States. This act is intended as a symbolic gesture of national pride in achievement and is not to be construed as a declaration of national appropriation by claim of sovereignty.

SEC. 9. This Act may be cited as the "National Aeronautics and Space Administration Authorization Act, 1970".

And the Senate agree to the same.

GEORGE P. MILLER,  
OLIN E. TEAGUE,  
JOSEPH KARTH,  
KEN HECHLER,  
JAMES G. FULTON,  
CHARLES A. MOSHER,  
RICHARD ROUDEBUSH,  
Managers on the Part of the House.

CLINTON P. ANDERSON,  
HOWARD W. CANNON,  
SPENCER L. HOLLAND,  
MARGARET CHASE SMITH,  
CARL T. CURTIS,  
Managers on the Part of the Senate.

STATEMENT OF THE MANAGERS ON THE PART OF THE HOUSE

The managers on the part of the House at the conference on the disagreeing votes of the two Houses on the amendment of the Senate to the bill (H.R. 11271) to authorize appropriations to the National Aeronautics and Space Administration for research and development, construction of facilities, and research and program management, and for other purposes, submit the following statement in explanation of the effect of the action agreed upon by the conferees and recommended in the accompanying conference report:

The amendment of the Senate struck all after the enacting clause in the House bill and substituted new language. The committee of conference agreed to accept the Senate amendment with certain amendments and stipulations proposed by the managers on the part of the House:

In fiscal year 1970 the National Aeronautics and Space Administration requested authorization in the amount of \$3,715,527,000. The House approved authorization in the amount of \$3,966,377,000. The Senate approved \$3,715,527,000.

As a result of the conference the total amount of appropriations to be authorized was adjusted to \$3,715,527,000. To this sum, the managers on the part of the House agreed. Thus, the total amount to be authorized to the National Aeronautics and Space Administration for fiscal year 1970 is exactly the amount requested by the administration. The amount agreed to by the conferees is \$250,850,000 less than was passed by the House for authorization. The managers on the part of the House agreed to the Senate amendment because of the following constraints: (a) the appropriations approved by the House, prior to passage of the authorization act by the House totaled \$3,696,983,000, or \$269,394,000 less than passed by the House for authorization and \$18.4 million less than the authorization agreed to by the conferees; (b) the report of the President's space task group concerning the future of the Nation's space effort released subsequent to the House action on the fiscal year 1970 authorization bill, indicated that a reevaluation of space priorities appears to be in order; and (c) the heavy demands on the Nation's resources for other programs dictate that economic restraints be exercised in the national space effort. The authorization was held to the level requested by the administration.

However, in receding to the Senate position with regard to the amount of funds to be authorized, stipulations were introduced on certain items by the House conferees to assure that the intent of Congress be firmly emphasized concerning selected specific programs:

(a) NASA requested a total of \$1,691,100,000 for the Apollo program. The House committee increased this by \$75,700,000 noting the need to provide funds for Saturn V vehicle improvement and additional funds for lunar exploration and Apollo operations. The Senate

approved the amount requested by NASA, \$1,691,100,000. The House receded and agreed to a reduction of \$75,700,000 in the Apollo program bringing the authorized total to \$1,691,100,000.

Although agreeing to the reduced funding level contained in the Senate amendment, the managers on the part of the House insisted that there is an urgent and continuing need to upgrade the Saturn V launch vehicle.

The House-passed bill included \$32.1 million for these purposes. These added funds were intended to permit NASA to uprate the Saturn V hydrogen-oxygen engines, develop modification kits for increased reliability, and to simplify Saturn V operations.

At the present NASA in-house rate of effecting improvements to the Saturn V vehicle, and present funding constraints, a more effective and efficient vehicle will not be available until vehicle No. SA518. If the \$32.1 million were made available improvements could be effected on vehicle No. SA514 thereby achieving increased reliability at an early date.

The managers on the part of the House urge that NASA marshal its resources within available funds and pursue a vigorous program designed to uprate the Saturn V at the earliest possible date. This will prevent the freezing of the state of the art and bring about improved reliability.

(b) The National Aeronautics and Space Administration requested \$25,100,000 for the earth resources survey program of which \$14,100,000 was designated for the earth resources technology satellite (ERTS) project. The House authorized \$35,100,000, of which \$24,100,000 was designated for the ERTS project in order to accelerate development of this important experimental satellite system.

The Senate authorized the amount requested by the Administration, \$25,100,000.

The managers on the part of the House agreed to the amount of the Administration request, based upon an agreement that the report of the committee of conference contain the strongest recommendation that research and development work under NASA's space applications program, particularly ERTS, should be emphasized in the future, and that future resources committed to the space applications program should be greatly increased. The managers on the part of the Senate concurred completely in this position.

(c) NASA requested \$22,850,000 for research in chemical propulsion. The House increased this amount by \$5,250,000 to be used primarily for research in large solid rocket booster technology. The Senate approved the requested budget figure. In conference, the House agreed to the NASA-requested level of \$22,850,000 as the authorized amount. However, the House conferees insisted upon emphasizing their continued concern that the chemical propulsion research area is not being funded at a level adequate to provide the technology required in the Nation's future space program. This is particularly true for the high-strength steels needed for the large solid rocket motor and for high energy rocket engine technology utilizing space storable fuels, including tripropellants, such as lithium-fluorine-hydrogen and also high-impulse boron fuels.

The House conferees, together with various Senate conferees, were in agreement on the need for the continued research and development

of the large solid rocket motor. The House Science and Astronautics Committee has through the years strongly favored the continued research and development of the large solid rocket motor. The recent successful firings of this booster have shown excellent progress and confirm the judgment of the House in stressing this project. The Congress has specifically urged NASA over many years to complete this research effort leading to a more reliable, relatively inexpensive, and economical first-stage booster.

(d) NASA requested \$77,700,000 for the aeronautical vehicles program. The House increased this request by \$3,200,000. The Senate approved the NASA request. The managers on the part of the House and Senate agreed on the NASA-requested level of \$77,700,000 as the authorized amount.

Additionally, the House and Senate conferees unanimously agreed to expressing strong approval of the increased funding trend over the past several years for aeronautics research by NASA—a trend repeatedly urged on NASA by the Congress. Further, the conferees agreed to supporting substantially increased effort in this field.

However, only about \$180 million out of a \$3.7 billion authorization for NASA is directly related to aeronautics. This allocation of less than 5 percent of NASA's budget does not represent adequate funding to carry out research on the crucial problems in aeronautics now facing our Nation.

In addition to specific programs and projects in conference, six general legislative amendments were in disagreement. Differences between the House and Senate versions were resolved as follows:

(a) The Senate amendment to H.R. 11271 contained a provision which would bar the use of any funds appropriated pursuant to the fiscal year 1970 National Aeronautics and Space Administration Authorization Act for grants to universities which prohibit the recruiting of military personnel on campuses unless the Administrator determines that such action would have an adverse effect on aeronautics and space programs. The provision is similar to language contained in the National Aeronautics and Space Administration Authorization Act, 1969. The managers on the part of the House agreed to the Senate provision.

(b) The House bill contained a provision which would cancel all authorizations to the National Aeronautics and Space Administration, enacted for fiscal years 1967, 1968, and 1969, for which appropriations have not been made, totaling \$327,070,000. The House took this action in order to tighten up authorization and enable closer congressional supervision over NASA programs. The Senate-approved bill did not contain this provision. In conference the managers on the part of the Senate agreed to the House provision.

(c) A provision included in H.R. 11271 as passed by the House states that "no part of the funds authorized by this act shall be used to provide payment, assistance, or services to any person who is convicted by a court of competent jurisdiction of an act to overthrow the Government of the United States." The Senate amendment contained no such provision. The managers on the part of the House receded to the Senate position and agreed to strike the provision, recognizing that such a provision could involve serious questions of interpretation of existing laws, and may require further legislative

hearings and review in both Houses. Nevertheless, although receding to the Senate position, the managers on the part of the House still support the principle expressed in this provision and wish to make it crystal clear that they believe that a comparable provision should be enacted into law at the earliest possible time. In the interim the National Aeronautics and Space Administration should be governed by the intent expressed above.

(d) The House bill contained a provision which would deny payment of any amount (as salary, as a loan or grant of any kind, or otherwise) from funds appropriated pursuant to authorizations contained in the National Aeronautics and Space Administration Authorization Act, 1970, to any individual who participates in campus disorders, willfully disobeys lawful regulations or orders causing disruption, is convicted by a court of competent jurisdiction of inciting, promoting, or carrying on a riot, or is convicted of any group activity resulting in material damage to property or injury to persons.

In conference, the managers on the part of the House offered a substitute provision which would accomplish the same objective, but would limit the denial of further payments to a period of 2 years when evoked. The managers on the part of the House offered the substitute amendment in order that the provision in the National Aeronautics and Space Administration Authorization Act, 1970 conform to similar provisions contained in the Education and National Science Foundation Acts for 1970. The managers on the part of the Senate agreed to the House substitute provision.

(e) The House bill contained an amendment which provides that "the flag of the United States, and no other flag, shall be implanted or otherwise placed on the surface of the moon, or on the surface of any planet, by the members of the crew of any spacecraft making a lunar or planetary landing as a part of a mission under the Apollo program or as a part of a mission under any subsequent program, the funds for which are provided entirely by the Government of the United States."

The Senate amendment contained no such provision. The managers on the part of the House further clarified the intent of this provision during the conference by stipulating that this section should not be construed to mean that the American flag must necessarily be implanted or otherwise placed on the surface of the moon or the surface of any planet on each and every landing subsequent to an initial landing. The managers on the part of the Senate receded, agreeing to the House provision.

(f) The Senate amendment contains a provision which would require former employees of the National Aeronautics and Space Administration, who worked on procurement or other contractual work, and who now work for companies under contract with the agency involving more than \$10 million annually, to disclose certain facts to the Administrator by March 1 of each year. Facts to be disclosed would include names, titles, and description of their work for the agency during the preceding 5 years, and a declaration of any work performed regarding planning, research, or decisionmaking. The provision also applies to present employees of the agency who previously worked for an aerospace contractor doing more than \$10 million in business annually under contract with the agency. The House bill contained no such provision.

The managers on the part of the House, recognizing that the language is identical (except for minor modifications) to a provision recently passed as part of the military authorization bill, accepted the Senate provision.

GEORGE P. MILLER,  
OLIN E. TEAGUE,  
JOSEPH KARTH,  
KEN HECHLER,  
JAMES G. FULTON,  
CHARLES A. MOSHER,  
RICHARD ROUDEBUSH.  
*Managers on the Part of the House.*

○



**An Act**

83 STAT. 196

To authorize appropriations to the National Aeronautics and Space Administration for research and development, construction of facilities, and research and program management, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That there is hereby authorized to be appropriated to the National Aeronautics and Space Administration:

(a) For "Research and development," for the following programs:

- (1) Apollo, \$1,691,100,000;
- (2) Space flight operations, \$225,627,000;
- (3) Advanced missions, \$2,500,000;
- (4) Physics and astronomy, \$117,600,000;
- (5) Lunar and planetary exploration, \$138,800,000;
- (6) Bioscience, \$20,400,000;
- (7) Space applications, \$128,400,000;
- (8) Launch vehicle procurement, \$112,600,000;
- (9) Sustaining university program, \$9,000,000;
- (10) Space vehicle systems, \$27,500,000;
- (11) Electronics systems, \$33,550,000;
- (12) Human factor systems, \$22,100,000;
- (13) Basic research, \$20,250,000;
- (14) Space power and electric propulsion systems, \$36,950,000;
- (15) Nuclear rockets, \$50,000,000;
- (16) Chemical propulsion, \$22,850,000;
- (17) Aeronautical vehicles, \$77,700,000;
- (18) Tracking and data acquisition, \$278,000,000;
- (19) Technology utilization, \$5,000,000.

(b) For "Construction of facilities," including land acquisitions, as follows:

- (1) Electronics Research Center, Cambridge, Massachusetts \$8,088,000;
- (2) Goddard Space Flight Center, Greenbelt, Maryland, \$670,000;
- (3) John F. Kennedy Space Center, NASA, Kennedy Space Center, Florida, \$12,500,000;
- (4) Langley Research Center, Hampton, Virginia, \$4,767,000;
- (5) Manned Spacecraft Center, Houston, Texas, \$1,750,000;
- (6) Wallops Station, Wallops Island, Virginia, \$500,000;
- (7) Various locations, \$26,425,000;
- (8) Facility planning and design not otherwise provided for, \$3,500,000.

(c) For "Research and program management," \$637,400,000.

(d) Appropriations for "Research and development" may be used (1) for any items of a capital nature (other than acquisition of land) which may be required for the performance of research and development contracts, and (2) for grants to nonprofit institutions of higher education, or to nonprofit organizations whose primary purpose is the conduct of scientific research, for purchase or construction of additional research facilities; and title to such facilities shall be vested in the United States unless the Administrator determines that the national program of aeronautical and

National Aeronautics and Space Administration Authorization Act, 1970, Research and development.

Construction of facilities.

Research and program management. Program specifications.

83 STAT. 197

Notice to congressional committees.

Scientific consultations.

Funds, limitation.

Grants, prohibition.

Report to Administrator.

Previous authorizations, cancellation.

space activities will best be served by vesting title in any such grantee institution or organization. Each such grant shall be made under such conditions as the Administrator shall determine to be required to insure that the United States will receive therefrom benefit adequate to justify the making of that grant. None of the funds appropriated for "Research and development" pursuant to this Act may be used for construction of any major facility, the estimated cost of which, including collateral equipment, exceeds \$250,000, unless the Administrator or his designee has notified the Speaker of the House of Representatives and the President of the Senate and the Committee on Science and Astronautics of the House of Representatives and the Committee on Aeronautical and Space Sciences of the Senate of the nature, location, and estimated cost of such facility.

(e) When so specified in an appropriation Act, (1) any amount appropriated for "Research and development" or for "Construction of facilities" may remain available without fiscal year limitation, and (2) maintenance and operation of facilities, and support services contracts may be entered into under the "Research and program management" appropriation for periods not in excess of twelve months beginning at any time during the fiscal year.

(f) Appropriations made pursuant to subsection 1(c) may be used, but not to exceed \$35,000, for scientific consultations or extraordinary expenses upon the approval or authority of the Administrator and his determination shall be final and conclusive upon the accounting officers of the Government.

(g) No part of the funds appropriated pursuant to subsection 1(c) for maintenance, repairs, alterations, and minor construction shall be used for the construction of any new facility the estimated cost of which, including collateral equipment, exceeds \$100,000.

(h) No part of the funds appropriated pursuant to subsection (a) of this section may be used for grants to any nonprofit institution of higher learning unless the Administrator or his designee determines at the time of the grant that recruiting personnel of any of the Armed Forces of the United States are not being barred from the premises or property of such institution except that this subsection shall not apply if the Administrator or his designee determines that the grant is a continuation or renewal of a previous grant to such institution which is likely to make a significant contribution to the aeronautical and space activities of the United States. The Secretary of Defense shall furnish to the Administrator or his designee within sixty days after the date of enactment of this Act and each January 30 and June 30 thereafter the names of any nonprofit institutions of higher learning which the Secretary of Defense determines on the date of each such report are barring such recruiting personnel from premises or property of any such institution.

(i) Notwithstanding any other provision of law, authorizations to the National Aeronautics and Space Administration, enacted for fiscal years 1967, 1968, and 1969, for which appropriations have not been made, totaling \$327,070,000, are hereby canceled, effective June 30, 1969, or the date of this Act, whichever is later.

SEC. 2. Authorization is hereby granted whereby any of the amounts prescribed in paragraphs (1), (2), (3), (4), (5), (6), and (7) of subsection 1(b) may, in the discretion of the Administrator of the National Aeronautics and Space Administration, be varied upward

5 per centum to meet unusual cost variations, but the total cost of all work authorized under such paragraphs shall not exceed the total of the amounts specified in such paragraphs.

Sec. 3. Not to exceed one-half of 1 per centum of the funds appropriated pursuant to subsection 1(a) hereof may be transferred to the "Construction of facilities" appropriation, and, when so transferred, together with \$10,000,000 of the funds appropriated pursuant to subsection 1(b) hereof (other than funds appropriated pursuant to paragraph (8) of such subsection) shall be available for expenditure to construct, expand, or modify laboratories and other installations at any location (including locations specified in subsection 1(b)), if (1) the Administrator determines such action to be necessary because of changes in the national program of aeronautical and space activities or new scientific or engineering developments, and (2) he determines that deferral of such action until the enactment of the next authorization Act would be inconsistent with the interest of the Nation in aeronautical and space activities. The funds so made available may be expended to acquire, construct, convert, rehabilitate, or install permanent or temporary public works, including land acquisition, site preparation, appurtenances, utilities, and equipment. No portion of such sums may be obligated for expenditure or expended to construct, expand, or modify laboratories and other installations unless (A) a period of thirty days has passed after the Administrator or his designee has transmitted to the Speaker of the House of Representatives and to the President of the Senate and to the Committee on Science and Astronautics of the House of Representatives and to the Committee on Aeronautical and Space Sciences of the Senate a written report containing a full and complete statement concerning (1) the nature of such construction, expansion, or modification, (2) the cost thereof including the cost of any real estate action pertaining thereto, and (3) the reason why such construction, expansion, or modification is necessary in the national interest, or (B) each such committee before the expiration of such period has transmitted to the Administrator written notice to the effect that such committee has no objection to the proposed action.

Sec. 4. Notwithstanding any other provision of this Act—

(1) no amount appropriated pursuant to this Act may be used for any program deleted by the Congress from requests as originally made to either the House Committee on Science and Astronautics or the Senate Committee on Aeronautical and Space Sciences.

(2) no amount appropriated pursuant to this Act may be used for any program in excess of the amount actually authorized for that particular program by sections 1(a) and 1(c), and

(3) no amount appropriated pursuant to this Act may be used for any program which has not been presented to or requested of either such committee.

unless (A) a period of thirty days has passed after the receipt by the Speaker of the House of Representatives and the President of the Senate and each such committee of notice given by the Administrator or his designee containing a full and complete statement of the action proposed to be taken and the facts and circumstances relied upon in support of such proposed action, or (B) each such committee before the expiration of such period has transmitted to the Administrator written notice to the effect that such committee has no objection to the proposed action.

Sec. 5. It is the sense of the Congress that it is in the national interest that consideration be given to geographical distribution of Federal

Transfer of funds.

Report to congressional committees.

Use of funds, restrictions.

Notice to congressional committees.

Definitions.

Former NASA employees, report requirements.

research funds whenever feasible, and that the National Aeronautics and Space Administration should explore ways and means of distributing its research and development funds whenever feasible.

Sec. 6. (a) As used in this section—

(1) The term "aerospace contractor" means any individual, firm, corporation, partnership, association, or other legal entity, which provides services and materials to or for the National Aeronautics and Space Administration in connection with any aerospace system.

(2) The term "services and materials" means either services or materials or services and materials which are provided as a part of or in connection with any aerospace system.

(3) The term "aerospace system" includes, but is not limited to, any rocket, launch vehicle, rocket engine, propellant, spacecraft, command module, service module, landing module, tracking device, communications device, or any part or component thereof, which is used in either manned or unmanned spaceflight operations.

(b) Any former employee of the National Aeronautics and Space Administration who at any time during the five-year period immediately preceding his termination of employment with the National Aeronautics and Space Administration was directly engaged in the procurement of any aerospace system or directly engaged in the negotiation, renegotiation, approval, or disapproval of any contract for the procurement of services or materials for or in connection with any aerospace system; or who served during the five-year period immediately preceding his termination of employment with the National Aeronautics and Space Administration at the factory or plant of an aerospace contractor in connection with work performed by such contractor or any aerospace system; or who was employed by the National Aeronautics and Space Administration during the five-year period preceding the termination of his employment at an annual salary rate of GS-15 or higher, and who

(1) was employed for any period of time during any calendar year by an aerospace contractor,

(2) represented any aerospace contractor during any calendar year at any hearing, trial, appeal, or other action in which the United States was a party and which involved services and materials provided or to be provided to the United States by such contractor, or

(3) represented any such contractor in any transaction with the National Aeronautics and Space Administration involving services or materials provided or to be provided by such contractor to the National Aeronautics and Space Administration,

shall file with the Administrator, in such form and manner as the Administrator may prescribe, not later than March 1 of the next succeeding calendar year, a report containing the following information:

(1) His name and address.

(2) The name and address of the aerospace contractor by whom he was employed or whom he represented.

(3) The title of the position held by him with the aerospace contractor.

(4) A brief description of his duties with the aerospace contractor.

(5) A brief description of his duties while employed by the National Aeronautics and Space Administration during the

three-year period immediately preceding his termination of employment.

(6) A description of any work performed by him in connection with any aerospace system while employed by the National Aeronautics and Space Administration, if the aerospace contractor by whom he is employed is providing substantial services or materials for such aerospace system, or is negotiating or bidding to provide substantial services or materials for such aerospace system.

(7) The date of the termination of his employment with the National Aeronautics and Space Administration, and the date on which his employment with the aerospace contractor began and, if no longer employed by such aerospace contractor, the date on which his employment with such aerospace contractor terminated.

(8) Such other pertinent information as the Administrator may require.

(c) Any employee of the National Aeronautics and Space Administration who was previously employed by an aerospace contractor in any calendar year and—

(1) who is directly engaged in the procurement of any aerospace system or is directly engaged in the negotiation, renegotiation, approval, or disapproval of any contract for the procurement of services or materials for or in connection with any aerospace system, or

(2) who is serving or has served as a representative of the National Aeronautics and Space Administration at the factory or plant of an aerospace contractor in connection with work being performed by such contractor on any aerospace system, shall file with the Administrator, in such form and manner as the Administrator may prescribe, not later than March 1 of the next succeeding calendar year, a report containing the following information:

(1) His name and address.

(2) The title of his position with the National Aeronautics and Space Administration.

(3) A brief description of his duties with the National Aeronautics and Space Administration.

(4) The name and address of the aerospace contractor by whom he was employed.

(5) The title of his position with such aerospace contractor.

(6) A brief description of his duties at the time he was employed by such aerospace contractor.

(7) A description of any work performed by him in connection with any aerospace system while he was employed by the aerospace contractor or while performing any legal services for such contractor, if such contractor is providing substantial services or materials for such aerospace system or is negotiating or bidding to provide substantial services or materials for such aerospace system.

(8) The date on which his employment with such contractor terminated and the date on which his employment with the National Aeronautics and Space Administration began thereafter.

(9) Such other pertinent information as the Administrator may require.

(d) (1) No former employee of the National Aeronautics and Space Administration shall be required to file a report under this section for

Employees formerly employed by aerospace contractor, report requirements.

Report to President of the Senate and Speaker of the House.

Recordkeeping, Availability of information, Penalty.

Report requirements, exceptions.

any year in which he was employed by an aerospace contractor if the total cost to the United States of services and materials provided the United States by such contractor during such year was less than \$10,000,000; and no employee of the National Aeronautics and Space Administration shall be required to file a report under this section if the total cost to the United States of services and materials provided the United States by the aerospace contractor by whom such employee was employed was less than \$10,000,000 in each of the applicable calendar years that he was employed by such contractor.

(2) No former National Aeronautics and Space Administration employee shall be required to file a report under this section for any calendar year on account of employment with the National Aeronautics and Space Administration if such active duty or employment was terminated three years or more prior to the beginning of such calendar year; and no employee of the National Aeronautics and Space Administration shall be required to file a report under this section for any calendar year on account of employment with or services performed for an aerospace contractor if such employment was terminated or such services were performed three years or more prior to the beginning of such calendar year.

(e) The Administrator shall, not later than May 1 of each year, file with the President of the Senate and the Speaker of the House of Representatives a report containing a list of the names of persons who have filed reports with him for the preceding calendar year pursuant to subsections (b) and (c) of this section. The Administrator shall include after each name so much information as he deems appropriate, and shall list the names of such persons under the aerospace contractor for whom they worked or for whom they performed services.

(f) Any former employee of the National Aeronautics and Space Administration whose employment with an aerospace contractor terminated during any calendar year shall be required to file a report pursuant to subsection (b) of this section for such year if he would otherwise be required to file under such subsection; and any person whose employment with the National Aeronautics and Space Administration terminated during any calendar year shall be required to file a report pursuant to subsection (c) of this section for such year if he would otherwise be required to file under such subsection.

(g) The Administrator shall maintain a file containing the information filed with him pursuant to subsections (b) and (c) of this section and such file shall be open for public inspection at all times during the regular workday.

(h) Any person who fails to comply with the filing requirements of this section shall be guilty of a misdemeanor and shall, upon conviction thereof, be punished by not more than six months in prison or a fine of not more than \$1,000, or both.

(i) No person shall be required to file a report pursuant to this section for any year prior to the calendar year 1970.

SEC. 7. (a) If an institution of higher education determines, after

affording notice and opportunity for hearing to an individual attending, or employed by, such institution, that such individual has been convicted by any court of record of any crime which was committed after the date of enactment of this Act and which involved the use of (or assistance to others in the use of) force, disruption, or the seizure of property under control of any institution of higher education to prevent officials or students in such institution from engaging in their duties or pursuing their studies, and that such crime was of a serious nature and contributed to a substantial disruption of the administration of the institution with respect to which such crime was committed, then the institution which such individual attends, or is employed by, shall deny for a period of two years any further payment to, or for the direct benefit of, such individual under any of the programs authorized by the National Aeronautics and Space Act of 1958, the funds for which are authorized pursuant to this Act. If an institution denies an individual assistance under the authority of the preceding sentence of this subsection, then any institution which such individual subsequently attends shall deny for the remainder of the two-year period any further payment to, or for the direct benefit of, such individual under any of the programs authorized by the National Aeronautics and Space Act of 1958, the funds for which are authorized pursuant to this Act.

(b) If an institution of higher education determines, after affording notice and opportunity for hearing to an individual attending, or employed by, such institution, that such individual has willfully refused to obey a lawful regulation or order of such institution after the date of enactment of this Act, and that such refusal was of a serious nature and contributed to a substantial disruption of the administration of such institution, then such institution shall deny, for a period of two years, any further payment to, or for the direct benefit of, such individual under any of the programs authorized by the National Aeronautics and Space Act of 1958, the funds for which are authorized pursuant to this Act.

(c)(1) Nothing in this Act shall be construed to prohibit any institution of higher education from refusing to award, continue, or extend any financial assistance under any such Act to any individual because of any misconduct which in its judgment bears adversely on his fitness for such assistance.

(2) Nothing in this section shall be construed as limiting or prejudicing the rights and prerogatives of any institution of higher education to institute and carry out an independent, disciplinary proceeding pursuant to existing authority, practice, and law.

(3) Nothing in this section shall be construed to limit the freedom of any student to verbal expression of individual views or opinions.

SEC. 8. The flag of the United States, and no other flag, shall be implanted or otherwise placed on the surface of the moon, or on the surface of any planet, by the members of the crew of any spacecraft

83 STAT. 202

83 STAT. 201  
83 STAT. 202

Short title.

72 Stat. 426,  
42 USC 2451  
note.Refusal to  
obey  
regulations,  
denial of  
payment.U.S. flag,  
implantation  
on moon or  
planet.

making a lunar or planetary landing as a part of a mission under the Apollo program or as a part of a mission under any subsequent program, the funds for which are provided entirely by the Government of the United States. This act is intended as a symbolic gesture of national pride in achievement and is not to be construed as a declaration of national appropriation by claim of sovereignty.

SEC. 9. This Act may be cited as the "National Aeronautics and Space Administration Authorization Act, 1970".

Approved November 18, 1969.

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LEGISLATIVE HISTORY:

HOUSE REPORTS: No. 91-255 (Comm. on Science & Astronautics) and  
No. 91-609 (Comm. of Conference).

SENATE REPORT No. 91-282 (Comm. on Aeronautical & Space Sciences).  
CONGRESSIONAL RECORD, Vol. 115 (1969):

June 10: Considered and passed House.  
Sept. 18, 19: Considered and passed Senate, amended.  
Nov. 6: House agreed to conference report.  
Nov. 7: Senate agreed to conference report.

91st CONGRESS } HOUSE OF REPRESENTATIVES { REPORT  
1st Session } { No. 91-316

INDEPENDENT OFFICES AND DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT APPROPRIATION BILL, 1970

JUNE 19, 1969.—Committed to the Committee of the Whole House on the State of the Union and ordered to be printed

Mr. EVINS of Tennessee, from the Committee on Appropriations, submitted the following

REPORT

[To accompany H.R. 12307]

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

For the programs of the National Aeronautics and Space Administration the bill provides total appropriations of \$3,696,983,000. This amount is \$63,544,000 below the original budget, \$18,544,000 below the revised budget, \$298,290,000 below the appropriations for 1969 and \$269,394,000 below the total authorizations recently approved by the House.

The Committee shares our Nation's pride in the accomplishments of the national space program. Our achievements in space are outstanding. The NASA team which has made the space program a resounding success are to be commended. The two manned space flights around the moon this past year are feats that rank high among the accomplishments of man. The proposed landings on the moon this year will be another dramatic and major step and achievement in space exploration.

The Committee feels that an adequately funded space program is essential to the progress of this Nation. However, with the inflationary spiral, the crisis we face in the inner cities, the crucial housing shortage, and other domestic and international problems, the Committee must, in its deliberations, give consideration to all of these problems, assess priorities, and then recommend the funding level providing a balanced space program. The funding which the Committee recommends in the bill is consistent with this objective and should be adequate to carry out the objectives of the space program if prudent management practices are applied in the operations of NASA.

Basically NASA's operations are divided into three funding programs set forth in the following table.

	Appropriation, 1969	Original budget estimate, 1970	Revised budget estimate, 1970	Recommended in bill
Research and development.....	\$3,370,300,000	\$3,051,427,000	\$3,006,427,000	\$3,000,000,000
Construction of facilities.....	21,800,000	58,700,000	58,700,000	53,233,000
Research and program management...	603,173,000	650,900,000	650,900,000	643,750,000
Total.....	3,995,273,000	3,760,527,000	3,715,527,000	3,696,983,000

† \$117,473,000 unused carryover from 1969 available for obligation in 1970.

*Research and development.*—The Committee recommends \$3,000,000,000 for this program which is \$6,427,000 less than the budget estimate of \$3,006,427,000 and \$264,427,000 less than the amount recommended by the House authorization. With the unobligated carryover from 1969 of \$117,473,000, a total of \$3,117,473,000 will be

available for obligation in 1970. The Committee expects that adjustments can be made from the totals for projects that may be authorized by law, but that the individual program items may not be exceeded.

*Construction of facilities.*—The budget request for construction is \$58,200,000, of which the Committee recommends \$53,233,000. The proposed facility to replace existing housing of the maintenance staff at Cape Kennedy and the proposed new aircraft noise reduction facility at Langley have been deferred at this time.

*Research and program management.*—The bill contains \$643,750,000, the same amount as contained in the House passed authorization bill, for research and program management. This is a reduction of \$7,150,000 from the revised budget of \$650,900,000. The Committee feels that the recommended funding level should be adequate for these activities.

#### TITLE IV

#### GENERAL PROVISIONS

The bill carries the same general provisions as in the current year except for the new Section 412. This section provides for the elimination of the restrictions on filling vacancies applicable to the department and agencies in this bill in 1970, pursuant to Section 201 of P.L. 90-364. This is identical to the action taken by the House already on the two prior appropriation bills that have been considered.

#### LIMITATIONS AND LEGISLATIVE PROVISIONS

The following limitations and legislative provisions not heretofore carried in connection with any appropriation bill are recommended.

On page 53, line 13, in connection with General provisions:

*Sec. 412. Positions in the agencies covered by this Act, whether financed from funds contained in this Act or from other sources, may be filled during the fiscal year 1970 without regard to the provisions of section 201 of Public Law 90-364, and such positions shall not be taken into consideration in determining numbers of employees under subsection (a) of that section or numbers of vacancies under subsection (b) of that section.*

**PERMANENT NEW BUDGET (OBLIGATIONAL) AUTHORITY—TRUST FUNDS**

[Becomes available automatically under earlier, or "permanent" law without further, or annual, action by the Congress. Thus, these amounts are *not* included in the accompanying bill]

Agency and item (1)	New budget (obligational) authority, 1969 (2)	Budget estimate of new (obligational) authority, 1970 (3)	Increase (+) or decrease (-) (4)
National Aeronautics and Space Administration: Miscellaneous trust funds.....	1,548,000	2,400,000	+852,000

**COMPARATIVE STATEMENT OF NEW BUDGET (OBLIGATIONAL) AUTHORITY FOR 1969 AND BUDGET ESTIMATES AND AMOUNTS RECOMMENDED IN THE BILL FOR 1970—Continued**

[Note—All amounts are in the form of "appropriations" unless otherwise indicated]

Agency and item (1)	New budget (obligational) authority enacted to date, fiscal year 1969 (2)	Budget estimates of new (obligational) authority, fiscal year 1970 (3)	New budget (obligational) authority recommended in bill (4)	Bill compared with—	
				New budget (obligational) authority, fiscal year 1969 (5)	Budget estimates of new (obligational) authority, fiscal year 1970 (6)
<b>NATIONAL AERONAUTICS AND SPACE ADMINISTRATION</b>					
Research and development.....	3,370,300,000	3,006,427,000	3,000,000,000	-370,300,000	-6,427,000
Construction of facilities.....	21,800,000	58,200,000	53,233,000	+31,433,000	-4,967,000
Research and program management.....	603,173,000	650,900,000	643,750,000	+40,577,000	-7,150,000
Total, National Aeronautics and Space Administration.....	3,995,273,000	3,715,527,000	3,696,983,000	-298,290,000	-18,544,000

# Calendar No. 514

91st CONGRESS } SENATE { REPORT  
1st Session } No. 91-521

## INDEPENDENT OFFICES AND DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT APPROPRIATION BILL, 1970

NOVEMBER 6, 1969.—Ordered to be printed

Mr. PASTORE, from the Committee on Appropriations, submitted the following

### REPORT

[To accompany H.R. 12307]

The Committee on Appropriations, to which was referred the bill (H.R. 12307) making appropriations for sundry independent executive bureaus, boards, commissions, corporations, agencies, offices, and the Department of Housing and Urban Development, for the fiscal year ending June 30, 1970, and for other purposes, reports the same to the Senate with various amendments and presents herewith information relative to the changes made.

The report reflects the new budget concept and presents the effects of the committee's recommendations in terms of new budget (obligational) authority, which includes appropriations, authorizations to spend public debt receipts, and contract authorizations, less appropriations to liquidate contract authorizations.

#### AMOUNTS IN NEW BUDGET (OBLIGATIONAL) AUTHORITY

Amount of bill as passed House.....	\$14,909,089,000
Amount of increase by Senate.....	72,860,000
Amount of bill as reported to Senate.....	14,981,949,000
Amount of appropriations, 1969.....	15,049,246,000
Amount of budget estimates, 1970 (as amended).....	15,512,969,600
Under the estimates for 1970 (as amended)....	531,020,600
Under the appropriations for 1969.....	67,297,000

#### GENERAL STATEMENT

The bill provides a total amount of \$14,981,949,000, which is \$67,297,000 under the appropriations for 1969, \$531,020,600 under the amended estimates for 1970, and an increase of \$72,860,000 over the House bill.

The committee recommendations are based upon the estimates considered by the House, in House Document No. 91-15, and amend-

ments contained in House Documents Nos. 91-100, 91-113 and 91-117 and in Senate Documents Nos. 91-29, 91-34 and 91-36.

The following budget amendments were submitted to the Senate and not considered by the House:

General Services Administration, construction, public buildings project—Senate Document 91-29 adds \$7,396,000 for FBI Academy Quantico, Va.

Civil Service Commission—Senate Document 91-34 adds \$160,000 for President's Commission on Personnel Interchange.

Office of Emergency Preparedness—Senate Document 91-36 adds \$125 million for Disaster Relief.

These three items total \$132,556,000 in budget amendments that were not considered by the House.

#### AUTHORIZATIONS

Since the House passed the bill, authorizations have progressed as follows:

For the National Aeronautics and Space Administration, the authorization passed the House June 10 at \$3,966,377,000, passed the Senate September 19 at \$3,715,527,000, and the House named conferees October 30 and agreed in conference November 4 at \$3,715,527,000.

For the National Science Foundation, the House reported the authorization June 5 and passed it October 7, the Senate passed it on September 18, and the conference report was filed October 27, authorizing their regular programs totaling \$477,605,000. For national sea grants, the authorization is contained in Public Law 90-477, at \$15 million.

For Appalachian regional development programs, the authorization passed the Senate July 8, passed the House July 15, was sent to conference July 17, and the conferees on October 21 agreed to file a report, authorizing appropriations for the highway program of \$175 million for each fiscal year from 1970 to 1972 and \$170 million for 1973. The authorization also substitutes contract authority for new obligational authority for the highway program, with liquidation payments to be provided later. Nonhighway programs are authorized at \$268,500,000 for the 2-fiscal year period ending June 30, 1971.

As this report is filed, none of these authorizations have been enacted.

#### COMMITTEE ACTION DELAYED

The committee began hearings on the bill on June 12 with statements from some of the agencies on budget estimates. After the House reported the bill, on June 19, the committee continued hearings with statements from the remainder of the agencies on budget estimates as well as requested restorations. The committee also heard statements from numerous public witnesses on various subjects and concluded the hearings on July 22.

At that time it was the intention of the committee to report the bill promptly, with the hope that the bill could be finally enacted in the comparatively early days of the new fiscal year beginning on July 1.

The good intentions of the committee have been hopelessly stymied month after month after month by the failure of the legislative committees to act upon three authorizations which are essential to the consideration by the committee of the funding required for those agencies in the bill—National Aeronautics and Space Administration, National Science Foundation, and Appalachian Development Act.

The real victims of this frustrating delay are the other agencies in the bill that do not require annual authorization. Personnel and funding restrictions in recent years have held them back, including the continuing resolution, and they must await the enactment of the bill for any relief in the way of new authority.

#### CONTRACT AUTHORITY

The Appropriations Committee takes note that a practice is developing which it feels is unwise and economically inadvisable; namely, the granting of contract authority by various legislative committees without consultation with the Appropriations Committee as to what ultimate effect this might have on our fiscal stability. We would hope that the Appropriations Committee, which is responsible for all Federal appropriations, would not be denied through this process the opportunity and the jurisdiction of determining the funding process of the Senate.

#### SUMMARY OF ESTIMATES

The following table summarizes the agency, commission, and department budget estimates and the amount recommended. The tabulation by items of appropriations is included at the end of the report.

SUMMARY OF ESTIMATES AND NEW BUDGET (OBLIGATIONAL) AUTHORITY

Agency or item	Budget estimates	Recommended in House bill	Senate recommendation
National Aeronautics and Space Council	\$524,000	\$500,000	\$524,000
Office of Emergency Preparedness	10,645,000	9,995,000	9,995,000
Office of Science and Technology	1,958,000	1,875,000	1,958,000
Appalachian Regional Development	462,500,000	445,000,000	105,000,000
Disaster relief	170,000,000	45,000,000	170,000,000
Appalachian Regional Commission	890,000	890,000	890,000
Civil Service Commission	157,280,000	155,450,000	156,847,000
Federal Communications Commission	23,950,000	21,600,000	22,850,000
Federal Home Loan Bank Board	(19,485,000)	(19,460,000)	(19,460,000)
Headquarters building	8,400,000	8,400,000	8,400,000
Federal Power Commission	16,650,000	16,000,000	16,400,000
Federal Trade Commission	19,940,000	19,500,000	19,500,000
General Services Administration	530,793,600	541,413,000	535,243,000
National Aeronautics and Space Administration	3,715,527,000	3,696,983,000	3,715,527,000
National Science Foundation	500,000,000	420,000,000	461,000,000
Renegotiation Board	4,140,000	3,640,000	4,140,000
Securities and Exchange Commission	20,416,000	19,750,000	20,416,000
Selective Service System	69,321,000	67,375,000	69,321,000
Veterans Administration	7,670,701,000	7,705,192,000	7,691,257,000
Civil defense (DOD)	75,300,000	64,200,000	72,500,000
Civil defense (HEW)	4,300,000	6,000,000	4,000,000
Department of Housing and Urban Development	2,042,638,000	1,651,326,000	1,896,181,000
<b>Total</b>	<b>15,512,969,600</b>	<b>14,909,089,000</b>	<b>14,981,949,000</b>

#### NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

The committee recommends total appropriations of \$3,715,527,000 for the programs of the National Aeronautics and Space Administration, which is identical with the total amount of the amended budget estimate and identical with the total amount of the authorization. The amount recommended is \$279,746,000 below the 1969 appropriation, and is \$18,544,000 over the House allowance.

The committee joins the House in sharing our Nation's pride in the outstanding achievements of the national space program, and commending the NASA team which has made the space program a resounding success. The manned space flights around the moon, culminating with the touchdown on the lunar surface from the Apollo XI mission on July 20, 1969, are dramatic feats that rank high among

the accomplishments of man, and the planned further landings on the moon will undoubtedly add to those achievements.

The committee agrees that an adequately funded space program is essential to the progress of the Nation. After giving consideration to the crisis we face in the cities, the crucial housing shortage, and other domestic and international problems, and assessing priorities, the committee believes the funding recommended should be adequate to carry out the objectives of the space program under prudent management.

#### RESEARCH AND DEVELOPMENT

1969 appropriation	\$3,370,300,000
Authorization (H.R. 11271)	3,019,927,000
Estimate, 1970	3,051,427,000
Budget amendment (H. Doc. 91-100)	3,006,427,000
House allowance	3,000,000,000
Committee recommendation	3,019,927,000

The committee recommends an increase of \$19,927,000, to provide the full amount of the authorization for research and development, \$3,019,927,000, which is \$13,500,000 over the budget estimate for the item. In addition, \$117,500,000 previously held in reserve is available for obligation.

#### CONSTRUCTION OF FACILITIES

1969 appropriation	\$21,800,000
Authorization (H.R. 11271)	58,200,000
Estimate, 1970	58,200,000
House allowance	53,233,000
Committee recommendation	58,200,000

Restoration of \$4,967,000 is recommended by the committee, to provide the full amount of the authorization as well as the budget estimate of \$58,200,000 for construction of facilities. The Committee believes that the proposed facility to replace existing housing of the maintenance staff at Cape Kennedy, estimated at \$200,000, and the proposed new aircraft noise reduction facility at Langley, estimated at \$4,767,000, are too important to be deferred at this time.

The committee urges the administration to give high priority to the early construction of the aircraft noise reduction laboratory at the Langley Research Center. This project will provide the proper facilities for the performance of fundamental research necessary to resolve the problems of excessive noise. It will be designed to accommodate experiments relating to both the basic properties and the practical applications of noise reduction, including capabilities for the study of the physical aspects of sound and evaluating the effects of noise as experienced by people. The committee is advised that there are no existing facilities either in Government or in industry suitable for this type of fundamental noise research, and the need for such research is critical.

#### RESEARCH AND PROGRAM MANAGEMENT

1969 appropriation	\$603,173,000
Authorization (H.R. 11271)	637,400,000
Estimate, 1970	650,900,000
House allowance	643,750,000
Committee recommendation	637,400,000

A reduction of \$6,350,000 is recommended by the committee, to provide \$637,400,000 for Research and Program Management, which is the amount of the authorization and is \$13,500,000 below the budget estimate.

## GENERAL PROVISIONS

## SECTION 408

Section 408 of the bill has been redrafted. The present status of Government policy concerning cost sharing on research projects is confused. The new language in section 408 requires cost sharing on both grants and contracts for the support of research resulting from proposals for projects not specifically solicited by the Government. Cost sharing is currently required on all grants but not contracts, even though these two fiscal instruments are used interchangeably by some Federal agencies.

The new language permits reimbursement of full costs of research projects in those few instances where they are solicited by the Government and supported by a grant instrument, which is not permissible under current bill language. But, general notice issued by an agency for research proposals in a given field is not construed as soliciting proposals.

Most Government support of research results from proposals by institutions for projects not specifically solicited by the Government. It is the view of the committee that research projects resulting from such unsolicited proposals generally benefit the performing organization as well as the sponsoring Government agency. This is reflected by a long history of cost sharing in this type of research by educational institutions, not-for-profit organizations, and industrial research laboratories. The unsolicited proposals usually represent the ideas of a scientist or group of scientists in an institution and therefore are ordinarily closely related to the fundamental long-term objective or function of the performing organization. Thus, in universities, unsolicited research projects and the universities' educational function often overlap or serve similar ends. These characteristics of unsolicited proposals and the resulting research lead naturally to the question of mutuality of interest between the Government and the performing educational, industrial, or not-for-profit institution. The new section 408 requires cost sharing on projects resulting from such unsolicited proposals. The extent of sharing by the institution should be related to the benefit accruing to it.

Although different from language appearing in previous bills, the new language is generally consistent with section 305 of Public Law 90-550, and will permit the orderly evolution of administrative regulations to incorporate the new principles. The purpose of any new regulations promulgated as a result of the change in the bill language should be designed to establish equitable and uniform policies among the various governmental agencies insofar as practicable. Such regulations should encourage efficient utilization of our limited governmental resources, promote sound planning and prudent fiscal policies at the performing organizations, and foster mutually beneficial relationships between the performing organizations and the Government.

Kinds of costs shared, as well as the amount of cost sharing, should be a paramount factor in developing such regulations. In educational institutions cost sharing should generally be related to the amount of faculty salaries associated with the research project. The cost sharing principles of the National Science Foundation as outlined in its important notice dated January 24, 1966, provide one example of requirements for this type of cost sharing by educational institutions. For not-for-profit and industrial performers the cost sharing should be related to the relative benefits of the research to the performer and to the Government.

It is realized that careful consideration must be given in extending the principles of required cost sharing to all unsolicited research projects, especially those with industrial performers. For instance, special circumstances regarding health-related research should be accommodated in any new administrative regulations.

The committee feels that the imposition of a statutory limit on reimbursement of indirect costs is not an equitable or effective mechanism for implementing a policy of cost sharing.

**COMPARATIVE STATEMENT OF NEW BUDGET (OBLIGATIONAL) AUTHORITY FOR 1969 AND THE BUDGET ESTIMATES FOR 1970**

**PERMANENT NEW BUDGET (OBLIGATIONAL) AUTHORITY—FEDERAL FUNDS**

[Becomes available automatically under earlier, or "permanent" law without further, or annual, action by the Congress. Thus, these amounts are not included in the accompanying bill]

Agency and Item (1)	New budget (obligational) authority, 1969 (2)	Budget estimate of new (obligational) authority, 1970 (3)	Increase (+) or decrease (-) (4)
National Aeronautics and Space Administration: Miscellaneous trust funds.....	1,548,000	2,400,000	+852,000

**COMPARATIVE STATEMENT OF NEW BUDGET (OBLIGATIONAL) AUTHORITY FOR 1969 AND BUDGET ESTIMATES AND AMOUNTS RECOMMENDED IN THE BILL FOR 1970**

[Note—All amounts are in the form of "appropriations" unless otherwise indicated]

Agency and item	New budget (obligational) authority enacted to date fiscal year 1969 <sup>1</sup>	Budget estimates of new (obligational) authority, fiscal year 1970	New budget (obligational) authority recommended in House bill	New budget (obligational) authority recommended in Senate bill	Increase (+) or decrease (-) Senate bill compared with—		
					Appropriations NOA, 1969	Budget estimates NOA, 1970	House bill NOA, 1970
<b>NATIONAL AERONAUTICS AND SPACE ADMINISTRATION</b>							
Research and development.....	3,370,300,000	3,006,427,000	3,000,000,000	3,019,927,000	-350,373,000	+13,500,000	+19,927,000
Construction of facilities.....	21,800,000	58,200,000	53,233,000	58,200,000	+38,400,000		1,967,000
Research and program management.....	603,173,000	650,900,000	643,750,000	637,400,000	+34,227,000	-13,500,000	-6,350,000
<b>Total, National Aeronautics and Space Administration.</b>	<b>3,995,273,000</b>	<b>3,715,527,000</b>	<b>3,696,983,000</b>	<b>3,715,527,000</b>	<b>-279,746,000</b>		<b>+18,544,000</b>

INDEPENDENT OFFICES AND DEPARTMENT OF HOUSING  
AND URBAN DEVELOPMENT APPROPRIATIONS, 1970

NOVEMBER 17, 1969.—Ordered to be printed

Mr. EVINS of Tennessee, from the Committee of Conference, submitted  
the following

CONFERENCE REPORT

[To accompany H.R. 12307]

JOE L. EVINS,  
EDWARD P. BOLAND,  
GEORGE E. SHIPLEY,  
ROBERT N. GIAIMO,  
JOHN O. MARSH, JR.,  
DAVID PRYOR,  
GEORGE MAHON,  
CHARLES R. JONAS,  
LOUIS C. WYMAN,  
BURT L. TALCOTT,  
JOSEPH M. McDADE,  
FRANK T. BOW,

*Managers on the Part of the House.*

JOHN O. PASTORE,  
WARREN G. MAGNUSON,  
ALLEN J. ELLENDER,  
RICHARD B. RUSSELL,  
SPESARD L. HOLLAND,  
CLINTON P. ANDERSON,  
GORDON ALLOTT,  
MARGARET CHASE SMITH,  
ROMAN L. HRUSKA,  
MILTON R. YOUNG,

*Managers on the Part of the Senate.*

STATEMENT OF THE MANAGERS ON THE PART OF THE  
HOUSE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

Amendment No. 18: Appropriates \$3,006 million for research and development instead of \$3 billion as proposed by the House and \$3,019,927,000 as proposed by the Senate.

The committee of conference is proud of the achievements of the National Aeronautics and Space Administration and the astronauts in placing the United States first in space. The committee favors a balanced program of space exploration for NASA, but considerable concern has been expressed about the future of funding for manned lunar programs because of budget constraints at this time and a question of national priorities. The majority of the conferees therefor suggest that the legislative committees of the House of Representatives and the Senate, the National Aeronautics and Space Administration, and the administration make a careful review of our policy of manned lunar programs for the future and decide and determine a policy, and that the Committees on Appropriations be advised of the policy determined at the earliest possible date.

Amendment No. 19: Appropriates \$53,233,000 for construction of facilities as proposed by the House instead of \$58,200,000 as proposed by the Senate. The committee of conference is agreed that the new aircraft noise facility at Langley, Va., and a maintenance facility at Cape Kennedy, Fla., may be initiated within the total funds provided.

Amendment No. 20: Appropriates \$637,400,000 for research and program management as proposed by the Senate instead of \$643,750,000 as proposed by the House.

TITLE IV—GENERAL PROVISIONS

Amendment No. 50: Reported in technical disagreement. The House conferees will offer a motion to recede and concur in the amendment

INDEPENDENT OFFICES AND DEPARTMENT OF HOUSING  
AND URBAN DEVELOPMENT APPROPRIATIONS, 1970

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BURT L. TALCOTT,  
JOSEPH M. MCDADE,  
FRANK T. BOW,  
*Managers on the Part of the House.*  
JOHN O. PASTORE,  
WARREN G. MAGNUSON,  
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RICHARD B. RUSSELL,  
SPENCER L. HOLLAND,  
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GORDON ALLOTT,  
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STATEMENT OF THE MANAGERS ON THE PART OF THE  
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TITLE IV—GENERAL PROVISIONS

Amendment No. 50: Reported in technical disagreement. The House conferees will offer a motion to recede and concur in the amendment.



Public Law 91-126  
91st Congress, H. R. 12307  
November 26, 1969

## An Act

83 STAT., 221

Making appropriations for sundry independent executive bureaus, boards, commissions, corporations, agencies, offices, and the Department of Housing and Urban Development for the fiscal year ending June 30, 1970, and for other purposes.

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,* That the following sums are appropriated, out of any money in the Treasury not otherwise appropriated, for sundry independent executive bureaus, boards, commissions, corporations, agencies, offices, and the Department of Housing and Urban Development for the fiscal year ending June 30, 1970, and for other purposes, namely:

Independent  
Offices and  
Department of  
Housing and  
Urban  
Development  
Appropriation  
Act, 1970.

### NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

#### RESEARCH AND DEVELOPMENT

For necessary expenses, not otherwise provided for, including research, development, operations, services, minor construction, maintenance, repair, and alteration of real and personal property; and purchase, hire, maintenance, and operation of other than administrative aircraft necessary for the conduct and support of aeronautical and space research and development activities of the National Aeronautics and Space Administration, \$3,006,000,000, to remain available until expended.

#### CONSTRUCTION OF FACILITIES

For advance planning, design, and construction of facilities for the National Aeronautics and Space Administration, and for the acquisition or condemnation of real property, as authorized by law, \$53,233,000, to remain available until expended.

#### RESEARCH AND PROGRAM MANAGEMENT

For necessary expenses of research in Government laboratories, management of programs and other activities of the National Aeronautics and Space Administration, not otherwise provided for, including uni-

83 STAT., 230

80 Stat., 508;  
81 Stat., 206.

Transfer of  
funds.

Employees,  
military  
leave,  
restoration  
of position.

forms or allowances therefor, as authorized by law (5 U.S.C. 5901-5902); minor construction; awards; hire, maintenance and operation of administrative aircraft; purchase (not to exceed thirty-five for replacement only) and hire of passenger motor vehicles; and maintenance, repair, and alteration of real and personal property; \$637,400,000: *Provided*, That contracts may be entered into under this appropriation for maintenance and operation of facilities, and for other services, to be provided during the next fiscal year.

#### GENERAL PROVISIONS

Not to exceed 5 per centum of any appropriation made available to the National Aeronautics and Space Administration by this Act may be transferred to any other such appropriation.

Not to exceed \$35,000 of the appropriation "Research and Program Management" in this Act for the National Aeronautics and Space Administration shall be available for scientific consultations or extraordinary expense, to be expended upon the approval or authority of the Administrator and his determination shall be final and conclusive.

#### TITLE IV—GENERAL PROVISIONS

SEC. 401. Where appropriations in titles I and II of this Act are expendable for travel expenses of employees and no specific limitation has been placed thereon, the expenditures for such travel expenses may not exceed the amounts set forth therefor in the budget estimates submitted for the appropriations: *Provided*, That this section shall not apply to travel performed by uncompensated officials of local boards and appeal boards of the Selective Service System; to travel performed directly in connection with care and treatment of medical beneficiaries of the Veterans Administration; or to payments to inter-agency motor pool where separately set forth in the budget schedules.

SEC. 402. No part of any appropriation contained in titles I and II of this Act shall be available to pay the salary of any person filling a position, other than a temporary position, formerly held by an employee who has left to enter the Armed Forces of the United States and has satisfactorily completed his period of active military or naval service and has within ninety days after his release from such service

or from hospitalization continuing after discharge for a period of not more than one year, made application for restoration to his former position and has been certified by the Civil Service Commission as still qualified to perform the duties of his former position and has not been restored thereto.

Sec. 403. No part of any appropriation made available by the provisions of titles I and II of this Act shall be used for the purchase or sale of real estate or for the purpose of establishing new offices outside the District of Columbia: *Provided*, That this limitation shall not apply to programs which have been approved by the Congress and appropriations made therefor.

Sec. 404. No part of any appropriation contained in this Act, or of the funds available for expenditure by any corporation or agency included in this Act, shall be used for publicity or propaganda purposes designed to support or defeat legislation pending before the Congress.

Sec. 405. No part of any appropriation contained in this Act, or of the funds available for expenditure by any corporation or agency included in this Act, shall be used to pay the compensation of any employee engaged in personnel work in excess of the number that would be provided by a ratio of one such employee to one hundred and thirty-five, or a part thereof, full-time, part-time, and intermittent employees of the corporation or agency concerned: *Provided*, That for purposes of this section employees shall be considered as engaged in personnel work if they spend half-time or more in personnel administration consisting of direction and administration of the personnel program; employment, placement, and separation; job evaluation and classification; employee relations and services; wage administration; and processing, recording, and reporting.

Sec. 406. Appropriations and funds available for the administrative expenses of the Department of Housing and Urban Development shall be available in the current fiscal year for purchase of uniforms, or allowances therefor, as authorized by law (5 U.S.C. 5901-5902); hire of passenger motor vehicles; and services as authorized by 5 U.S.C. 5109.

Sec. 407. Funds made available for the Department of Housing and Urban Development under title III of this Act shall be available, without regard to the limitations on administrative expenses, for legal services on a contract or fee basis, and for utilizing and making payment for services and facilities of Federal National Mortgage Association or Government National Mortgage Association, Federal Reserve banks or any member thereof, Federal home loan banks, and any insured bank within the meaning of the Federal Deposit Insurance Corporation Act, as amended (12 U.S.C. 1811-1811).

Sec. 408. None of the funds provided in this Act may be used for payment, through grants or contracts, to recipients that do not share in the cost of conducting research resulting from proposals for projects not specifically solicited by the Government: *Provided*, That the extent of cost sharing by the recipient shall reflect the mutuality of interest of the grantee or contractor and the Government in the research.

Sec. 409. No part of any appropriation contained in this Act shall remain available for obligation beyond the current fiscal year unless expressly so provided herein.

Sec. 410. None of the funds in this Act shall be available to finance interdepartmental boards, commissions, councils, committees, or similar groups under sec. 214 of the Independent Offices Appropriation

50-5000, 43

50-5000, 041

Real estate, etc.

Publicity or propaganda.

Personnel wages, limitation.

Uniforms, etc.

40 Stat. 509; 81 Stat. 209; 80 Stat. 416.

Legal and banking services.

44 Stat. 573; Research projects.

Interdepartmental groups, etc.

Pub. Stat. 131.

Payments to convicted rioters, prohibited.

Federal employees, limitation, exception, Act, p. 83.

Short title.

Act, 1946 (31 U.S.C. 691) which do not have prior and specific Congressional approval of such method of financial support.

Sec. 411. No part of the funds appropriated by this Act shall be used to pay the salary of any Federal employee who is convicted in any Federal, State, or local court of competent jurisdiction, of inciting, promoting, or carrying on a riot, or any group activity resulting in material damage to property or injury to persons, found to be in violation of Federal, State, or local laws designed to protect persons or property in the community concerned.

Sec. 412. Positions in the agencies covered by this Act, whether financed from funds contained in this Act or from other sources, may be filled during the fiscal year 1970 without regard to the provisions of section 201 of Public Law 90-361, and such positions shall not be taken into consideration in determining numbers of employees under subsection (a) of that section or numbers of vacancies under subsection (b) of that section.

This Act may be cited as the "Independent Offices and Department of Housing and Urban Development Appropriation Act, 1970".

Approved November 26, 1969.

LEGISLATIVE HISTORY:

HOUSE REPORT: No. 91-316 (Comm. on Appropriations) and No. 91-449 (Comm. of Conference).  
 SENATE REPORT: No. 91-521 (Comm. on Appropriations).  
 CONGRESSIONAL RECORD, Vol. 115 (1969):  
 June 24: Considered and passed House.  
 Nov. 10, 11: Considered and passed Senate, amended.  
 Nov. 18: House and Senate agreed to conference report.

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