

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION



CHRONOLOGICAL HISTORY
FISCAL YEAR 1976
BUDGET SUBMISSION

Prepared by:
NASA Comptroller
Office of Budget Operations
Code BTF Ext. 58466

FY 1976 AND TRANSITION PERIOD

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FISCAL YEAR 1976

LEGISLATIVE REFERENCE

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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

Chronological History of the FY 1976 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 Budget Submission	House Comm. H.R. 4706 Rep. 94-63 3/14/75 Appd. 4/9/75	Senate Comm. S.R. 4700 Rep. 94-103 5/5/75 Appd. 5/12/75	Conf. Comm. Appd. 6/4/75 Rep. 94-259 P.L. 94-39 6/19/75	Difference from Budget Submission	House Comm. H.R. 8070 Rep. 94-313 6/19/75 Appd. 6/24/75	Senate Comm. H.R. 8070 Rep. 94-326 7/24/75 Appd. 7/26/75	Conf. Comm. Appd. 9/23/75 Rep. 94-502 P.L. 94-116 10/17/75	Difference from Budget Submission	Difference from Authorization
TOTAL APPROPRIATIONS:										
Research & Development..	2,678,380	2,684,180	2,686,580	2,687,180	+8,800	2,628,980	2,685,380	2,677,380	-1,000	-9,800
Construction of Facilities.....	84,620	125,693	82,130	99,130	+14,510	82,130	82,130	82,130	-2,490	-17,000
Research and Program Management.....	(776,000)	(776,000)	(776,000)	(776,000)	(---	(775,512)	(775,512)	(775,512) ^{3/}	(-488)	(-488)
Basic Submission.....	(19,986)	(16,800)	(16,800)	(16,800)	(-3,186)	(16,800)	(16,800)	(16,800)	(-3,186)	(---
Supplemental.....										
TOTAL R&PM.....	795,986	792,800	792,800	792,800	-3,186	792,312	792,312	792,312	-3,674	-488
GRAND TOTAL.....	3,558,986	3,602,673	3,561,510	3,579,110	+20,124	3,503,422	3,599,822	3,551,822	-7,164	-27,288
R&D Appropriation:										
OMSF.....	1,414,600	1,412,100	1,409,100	1,411,100	-3,500	*	*	*	*	*
OSS.....	582,600	582,600	589,600	589,600	+7,000	*	*	*	*	*
OA.....	175,030	181,530	183,930	181,530	+6,500	*	*	*	*	*
OAST.....	250,250	252,250	250,250	250,250	---	*	*	*	*	*
OEP.....	5,900	5,900	5,900	5,900	---	*	*	*	*	*
OTDA.....	243,000	240,800	240,800	240,800	-2,200	*	*	*	*	*
OTU.....	7,000	9,000	7,000	8,000	+1,000	*	*	*	*	*
TOTAL, R&D.....	2,678,380	2,684,180	2,686,580	2,687,180	+8,800	2,628,980	2,685,380	2,677,380^{2/}	-1,000	-9,800
CoF Appropriation:										
OMSF.....	47,220	46,283	47,220	47,220	---	47,220	47,220	47,220	---	---
OSS.....	2,490	---	---	---	-2,490	---	---	---	-2,490	---
OAST.....	4,635	44,635	4,635	17,135	+12,500	4,635	4,635	4,635	---	-12,500
Comptroller.....	30,275	34,775	30,275	34,775	+4,500	30,275	30,275	30,275	---	-4,500
TOTAL, CoF.....	84,620	125,693	82,130	99,130	+14,510	82,130	82,130	82,130	-2,490	-17,000
R&PM Appropriation:										
Subtotal, R&PM.....	776,000	776,000	776,000	776,000	---	775,512 ^{1/}	775,512 ^{1/}	775,512	-488	-488
Supplemental Appropriation.....	19,986	16,800	16,800	16,800	-3,186	16,800	16,800	16,800	-3,186	---
TOTAL, R&PM.....	795,986	792,800	792,800	792,800	-3,186	792,312	792,312	792,312	-3,674	-488
TOTAL, NASA.....	3,558,986	3,602,673	3,561,510	3,579,110	+20,124	3,503,422	3,599,822	3,551,822	-7,164	-27,288

GPO 911-408

*Undistributed

^{1/} Decrease of \$488,000 reflects a ten percent reduction in the payment of GSA space rental charges.

^{2/} \$1.0 million may be reprogrammed from Pioneer-Venus for further planning of a Large Space Telescope (LST). Also, \$7.0 million may be reprogrammed from total R&D for Upper Atmosphere Research, Technology and Monitoring Program.

^{3/} Appropriated by Public Law 94-303 dated 6/1/76.

Prepared by:
NASA Comptroller
Office of Budget Operations
Code BTF Ext. 58466

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

Chronological History of the FY 1976 Budget Submission
(In thousands of dollars)

Subfunction Code	I T E M	A U T H O R I Z A T I O N					A P P R O P R I A T I O N						
		NASA Budget Submission	House Comm. H.R. 4700 Rep. 94-63 3/14/75 Appd. 4/9/75	Senate Comm. H.R. 4700 Rep. 94-103 5/5/75 Appd. 5/12/75	Conf. Comm. Appd. 6/4/75 Rep. 94-259 P.L. 94-39 6/19/75	Difference from Budget Submission	House Comm. H.R. 8070 Rep. 94-313 6/19/75 Appd. 6/24/75	Senate Comm. H.R. 8070 Rep. 94-326 7/24/75 Appd. 7/26/75	Conf. Comm. Appd. 9/23/75 Rep. 94-502 P.L. 94-116 10/17/75	Difference from Budget Submission	Difference from Authorization		
	RESEARCH AND DEVELOPMENT..	2,678,380	2,684,180	2,686,580	2,687,180	+8,800			2,628,980	2,685,380	2,677,380 ^{1/}	-1,000	-9,800
253	Space Shuttle.....	1,206,000	1,206,000	1,206,000	1,206,000	---		*	*	*	*	*	*
253	Space Flight Operations..	207,100	203,100	203,100	203,100	-4,000		*	*	*	*	*	*
253	Advanced Missions.....	1,500	3,000	---	2,000	+500		*	*	*	*	*	*
254	Physics and Astronomy...	155,800	156,800	162,800	162,800	+7,000		*	*	*	*	*	*
254	Lunar and Planetary.....	259,900	258,900	259,900	259,900	---		*	*	*	*	*	*
254	Launch Vehicle Proc.....	166,900	166,900	166,900	166,900	---		*	*	*	*	*	*
254	Space Applications.....	175,030	181,530	183,930	181,530	+6,500		*	*	*	*	*	*
405	Aeronautical Research and Technology.....	175,350	175,350	175,350	175,350	---		*	*	*	*	*	*
254	Space and Nuclear Research and Technology..	74,900	76,900	74,900	74,900	---		*	*	*	*	*	*
254	Energy Technology Applications.....	5,900	5,900	5,900	5,900	---		*	*	*	*	*	*
255	Tracking and Data Acq...	243,000	240,800	240,800	240,800	-2,200		*	*	*	*	*	*
255	Technology Utilization..	7,000	9,000	7,000	8,000	+1,000		*	*	*	*	*	*
	CONSTRUCTION OF FACILITIES	84,620	125,693	82,130	99,130	+14,510		82,130	82,130	82,130	-2,490	-17,000	
	Ames Research Center.....	2,695	15,195	2,695	15,195	+12,500		2,695	2,695	2,695	---	-12,500	
	Johnson Space Center.....	2,490	---	---	---	-2,490		---	---	---	-2,490	---	
	Langley Research Center..	1,940	29,440	1,940	1,940	---		1,940	1,940	1,940	---	---	
	Space Shuttle Facilities..	47,220	46,283	47,220	47,220	---		47,220	47,220	47,220	---	---	
	Rehabilitation and Mod....	16,000	16,000	16,000	16,000	---		16,000	16,000	16,000	---	---	
	Minor Construction.....	5,000	5,000	5,000	5,000	---		5,000	5,000	5,000	---	---	
	Facility Planning and Design.....	9,275	13,775	9,275	13,775	+4,500		9,275	9,275	9,275	---	-4,500	
	RESEARCH AND PROGRAM MANAGEMENT.....	795,986	792,800	792,800	792,800	-3,186		792,312	792,312	792,312	-3,674	-488	
	Basic Submission.....	776,000	776,000	776,000	776,000	---		775,512	775,512	775,512	-488	-488	
	Supplemental.....	19,986	16,800	16,800	16,800	-3,186		16,800	16,800	16,800	-3,186	---	
	TOTAL.....	3,558,986	3,602,673	3,561,510	3,579,110	+20,124		3,503,422	3,599,822	3,551,822	-7,164	-27,288	

GPO 9-11-408

*Undistributed

1/ \$1.0 million may be reprogrammed from Pioneer-Venus for further planning of a Large Space Telescope (LST). Also, \$7.0 million may be reprogrammed from total R&D for Upper Atmosphere Research, Technology and Monitoring Program.

Prepared by:
NASA Comptroller
Office of Budget Operations
Code BIT Ext. 58466

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

Chronological History of the FY 1976 Budget Submission
(In thousands of dollars)

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	RESEARCH AND DEVELOPMENT APPROPRIATION:	2,678,380	2,684,180	2,686,580	2,687,180	+8,300			2,528,980	2,685,380	2,677,380	-1,000	-9,800
	OFFICE OF MANNED SPACE FLIGHT.....	1,414,600	1,412,100	1,409,100	1,411,100	-3,500		*	*	*	*	*	*
253	Space Shuttle Program....	(1,206,000)	(1,206,000)	(1,206,000)	(1,206,000)	(---)		(*)	(*)	(*)	(*)	(*)	(*)
	Orbiter.....	877,300	877,300	877,300	877,300	---							
	Main Engine.....	135,500	135,500	135,500	135,500	---							
	Solid Rocket Boosters...	76,200	76,200	76,200	76,200	---							
	External Tank.....	66,100	66,100	66,100	66,100	---							
	Launch and Landing.....	50,900	50,900	50,900	50,900	---							
253	Space Flight Operations Program.....	(207,100)	(203,100)	(203,100)	(203,100)	(-4,000)		(*)	(*)	(*)	(*)	(*)	(*)
	Development, Test and Mission Operations....	166,100	161,100	161,100	161,100	-5,000							
	Space Life Sciences....	19,000	19,000	19,000	19,000	---							
	Mission Systems and Integration.....	22,000	23,000	23,000	23,000	+1,000							
253	Advanced Missions Program.	(1,500)	(3,000)	(---)	(2,000)	(+500)		(*)	(*)	(*)	(*)	(*)	(*)
	Advanced Mission Studies	1,500	3,000	---	2,000	+500							
	OFFICE OF SPACE SCIENCE...	582,600	582,600	589,600	589,600	+7,000		*	*	*	*	*	*
254	Physics and Astronomy Program.....	(155,800)	(156,800) ^{1/}	(162,800) ^{2/}	(162,800)	(+7,000)		(*) ^{3/}	(*) ^{4/}	(*) ^{5/}	(*)	(*)	(*)
	Large Observatories.....	62,000	*	*	*	*							
	Orbiting Explorers.....	33,000	*	*	*	*							
	Suborbital Programs.....	24,800	*	*	*	*							
	Supporting Activities...	31,400	*	*	*	*							
	Spacelab Science Program.....	4,600	*	*	*	*							

GPO 911-408

* Undistributed

^{1/} Increased \$1 million for Stratospheric Research.

^{2/} Increased \$7 million for Upper Atmospheric Research, Technology, and Monitoring Program.

^{3/} Large Space Telescope reduced \$1,000,000.

^{4/} Large Space Telescope reduction of \$1,000,000 restored by Senate; also Upper Atmospheric Research, Technology and Monitoring Program increased \$7,000,000.

^{5/} \$1.0 million may be reprogrammed from Pioneer-Venus for further planning of a Large Space Telescope (LST). Also, \$7.0 million may be reprogrammed from total R&D for Upper Atmosphere Research, Technology and Monitoring Program.

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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

Chronological History of the FY 1976 Budget Submission
(In thousands of dollars)

Subfunction Code	ITEM	AUTHORIZATION					APPROPRIATION						
		NASA Budget Submission	House Comm. H.R. 4700 Rep. 94-63 3/14/75 Appd. 4/9/75	Senate Comm. H.R. 4700 Rep. 94-103 5/5/75 Appd. 5/12/75	Conf. Comm. Appd. 6/4/75 Rep. 94-259 P.L. 94-39 6/19/75	Difference from Budget Submission	House Comm. H.R. 8070 Rep. 94-313 6/19/75 Appd. 6/24/75	Senate Comm. H.R. 8070 Rep. 94-326 7/24/75 Appd. 7/26/75	Conf. Comm. Appd. 9/23/75 Rep. 94-502 P.L. 94-116 10/17/75	Difference from Budget Submission	Difference from Authorization		
254	Lunar and Planetary Exploration Program.....	(259,900)	(258,900)	(259,900)	(259,900)	(---			(*) ^{1/}	(*) ^{2/}	(*) ^{3/}	(*)	(*)
	Viking.....	39,500	39,500	39,500	39,500	---							
	Outer Planets Missions..	82,400	82,400	82,400	82,400	---							
	Pioneer/Helios.....	62,600	62,600	62,600	62,600	---							
	Supporting Research and Technology/Advanced Studies.....	14,300	14,300	14,300	14,300	---							
	Planetary Astronomy.....	4,200	4,200	4,200	4,200	---							
	Data Analysis.....	1,400	1,400	1,400	1,400	---							
	Planetary Quarantine....	1,500	1,500	1,500	1,500	---							
	Planetary Flight Support	29,300	29,300	29,300	29,300	---							
	Lunar Research Program..	24,700	23,700	24,700	24,700	---							
254	Launch Vehicle Procurement Program.....	(166,900)	(166,900)	(166,900)	(166,900)	(---			(*)	(*)	(*)	(*)	(*)
	Scout.....	12,100	12,100	12,100	12,100	---							
	Centaur.....	113,800	113,800	113,800	113,800	---							
	Delta.....	36,600	36,600	36,600	36,600	---							
	Atlas-F.....	3,400	3,400	3,400	3,400	---							
	Supporting Research and Technology/Advanced Studies.....	1,000	1,000	1,000	1,000	---							
	OFFICE OF APPLICATIONS....	175,030	181,530	183,930	181,530	+6,500			*	*	*	*	*
254	Space Applications Program.....	(175,030)	(181,530)	(183,930)	(181,530)	(+6,500)			(*)	(*)	(*)	(*)	(*)
	Weather and Climate.....	33,600	34,600	34,600	34,600	+1,000							
	Pollution Monitoring....	19,200	19,200	19,200	19,200	---							
	Earth Resources Survey..	62,030	63,530	66,930	63,530	+1,500							
	Earth and Ocean Physics..	26,400	26,400	26,400	26,400	---							
	Space Processing.....	3,700	3,700	3,700	3,700	---							
	Communications.....	7,500	9,500	9,500	9,500	+2,000							
	Data Management.....	4,000	5,000	4,000	5,000	+1,000							
	Shuttle Payloads.....	3,000	4,000	4,000	4,000	+1,000							
	Advanced Applications Flight Experiments....	4,700	4,700	4,700	4,700	---							
	Applications Systems Analyses.....	5,000	5,000	5,000	5,000	---							
	Applications Explorer Missions.....	5,900	5,900	5,900	5,900	---							

SPD 911-408

*Undistributed

^{1/} Pioneer Venus deferred for one year (-\$48,400,000).

^{2/} Pioneer Venus restored (\$48,400,000).

^{3/} \$1.0 million may be reprogrammed from Pioneer-Venus for further planning of a Large Space Telescope (LST).

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	OFFICE OF AERONAUTICS AND SPACE TECHNOLOGY...	250,250	252,250	250,250	250,250	---			*	*	*	*	*
405	Aeronautical Research and Technology Program....	(175,350)	(175,350)	(175,350)	(175,350)	(---)			(*)	(*)	(*)	(*)	(*)
	Research and Technology Base.....	85,100	85,100	85,100	85,100	---							
	Systems Studies.....	3,000	3,000	3,000	3,000	---							
	Systems Technology Programs.....	46,550	46,550	46,550	46,550	---							
	Experimental Programs..	40,700	40,700	40,700	40,700	---							
254	Space and Nuclear Research and Technology Program.....	(74,900)	(76,900) ^{1/}	(74,900)	(74,900)	(---)			(*)	(*)	(*)	(*)	(*)
	Research and Technology Base.....	61,300	*	61,300	61,300	---							
	Systems Studies.....	1,600	*	1,600	1,600	---							
	Systems Technology Programs.....	2,200	*	2,200	2,200	---							
	Experimental Programs..	3,700	*	3,700	3,700	---							
	Low Cost Systems Program.....	6,100	*	6,100	6,100	---							
254	OFFICE OF ENERGY PROGRAMS	5,900	5,900	5,900	5,900	---			*	*	*	*	*
	Energy Technology Applications Program...	(5,900)	(5,900)	(5,900)	(5,900)	(---)			(*)	(*)	(*)	(*)	(*)
	Energy Research and Technology.....	2,200	2,200	2,200	2,200	---							
	Energy Applications....	3,000	3,000	3,000	3,000	---							
	Systems Analysis.....	700	700	700	700	---							
	OFFICE OF TRACKING AND DATA ACQUISITION.....	243,000	240,800	240,800	240,800	-2,200			*	*	*	*	*
255	Tracking and Data Acquisition Program....	(243,000)	(240,800)	(240,800)	(240,800)	(-2,200)			(*)	(*)	(*)	(*)	(*)
	Operations.....	192,400	191,400	191,400	191,400	-1,000							
	Systems Implementation.	41,400	41,400	41,400	41,400	---							
	Advanced Systems.....	9,200	8,000	8,000	8,000	-1,200							

GPO 911-408

* Undistributed
^{1/} increased \$1 million for Space Propulsion and Power Systems and \$1 million for Materials and Structures Technology.

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	OFFICE OF INDUSTRY AFFAIRS AND TECHNOLOGY UTILIZATION.....	7,000	9,000	7,000	8,000	+1,000	*	*	*	*	*
255	Technology Utilization Program.....	(7,000)	(9,000)	(7,000)	(8,000)	(+1,000)	(*)	(*)	(*)	(*)	(*)
	Industrial Applications.	3,220	4,220	3,220	*	*					
	Technology Applications.	3,025	4,025	3,025	*	*					
	Program Control and Evaluation.....	755	755	755	*	*					

GPO 311-408

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Office of Budget Operations
Code BTF Ext. 58400

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

Chronological History of the FY 1976 Budget Submission
(In thousands of dollars)

Subfunction Code	ITEM	AUTHORIZATION					APPROPRIATION						
		NASA Budget Submission	House Comm. H.R. 4700 Rep. 94-63 7/14/75 Appd. 4/9/75	Senate Comm. H.R. 4700 Rep. 94-103 5/5/75 Appd. 5/12/75	Conf. Comm. Appd. 6/4/75 Rep. 94-259 P.L. 94-30 6/19/75	Difference from Budget Submission	House Comm. H.R. 8070 Rep. 94-313 6/19/75 Appd. 6/24/75	Senate Comm. H.R. 8070 Rep. 94-326 7/24/75 Appd. 7/26/75	Conf. Comm. Appd. 9/23/75 Rep. 94-502 P.L. 94-116 10/17/75	Difference from Budget Submission	Difference from Authorization		
	CONSTRUCTION OF FACILITIES APPROPRIATION:	84,620	125,693	82,130	99,130	+14,510			82,130	82,130	82,130	-2,490	-17,000
405	AMES RESEARCH CENTER.....	(2,695)	(15,195)	(2,695)	(15,195)	(+12,500)			(2,695)	(2,695)	(2,695)	(---)	(-12,500)
405	R-Modification of 11-by 11-Foot Transonic Wind Tunnel.....	2,695	2,695	2,695	2,695	---			2,695	2,695	2,695	---	---
405	R-Modification of 40-by 80-Foot Subsonic Wind Tunnel.....	---	12,500	---	12,500	+12,500			---	---	---	---	-12,500
254	JOHNSON SPACE CENTER.....	(2,490)	(---)	(---)	(---)	(-2,490)			(---)	(---)	(---)	(-2,490)	---
254	S-Addition to Lunar Sample Curatorial Facility	2,490	---	---	---	-2,490			---	---	---	-2,490	---
405	LANGLEY RESEARCH CENTER...	(1,940)	(29,440)	(1,940)	(1,940)	(---)			(1,940)	(1,940)	(1,940)	(---)	(---)
405	R-Addition for Composite Model and Metal Finishing Shops.....	1,940	1,940	1,940	1,940	---			1,940	1,940	1,940	---	---
405	R-Construction of Transonic Research Tunnel.	---	27,500	---	---	---			---	---	---	---	---
253	M-SPACE SHUTTLE FACILITIES	(47,220)	(46,283)	(47,220)	(47,220)	(---)			(47,220)	(47,220)	(47,220)	(---)	(---)
	Modifications to Launch Complex 39 (KSC).....	13,110	13,110	13,110	13,110	---			13,110	13,110	13,110	---	---
	Construction of Orbiter Processing Facility (KSC).....	8,160	8,160	8,160	8,160	---			8,160	8,160	8,160	---	---
	Modifications for Solid Rocket Booster Processing Facilities (KSC).....	5,240	5,240	5,240	5,240	---			5,240	5,240	5,240	---	---
	Modifications for Hypergolic Checkout and Refurbishment Facilities (KSC).....	6,940	6,303	6,940	6,940	---			6,940	6,940	6,940	---	---
	Modifications for Launch Equipment Test Facilities (KSC).....	1,960	1,960	1,960	1,960	---			1,960	1,960	1,960	---	---
	Construction of Orbiter Approach and Landing Test Facilities (FRC, Calif. and Palmdale, Calif.).....	1,680	1,380	1,680	1,680	---			1,680	1,680	1,680	---	---
	Construction of Shuttle/Carrier Aircraft Mating Facilities (FRC, Calif. and Palmdale, Calif.).....	3,890	3,890	3,890	3,890	---			3,890	3,890	3,890	---	---

GPO #11-408
 B = NASA Comptroller Project.
 M = Manned Space Flight Project.
 R = Aeronautics and Space Technology Project.
 S = Space Science Project.

Prepared by:
 NASA Comptroller
 Office of Budget Operations
 Code BTJ Ext. 58466

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

Chronological History of the FY 1976 Budget Submission
(In thousands of dollars)

Submission Code	ITEM	AUTHORIZATION					APPROPRIATION					
		NASA Budget Submission	House Comm. H.R. 4700 Rep. 94-63 3/14/75 Appd. 4/9/75	Senate Comm. H.R. 4700 Rep. 94-103 5/5/75 Appd. 5/12/75	Conf. Comm. Appd. 6/4/75 Rep. 94-259 P.L. 94-39 6/19/75	Difference from Budget Submission	House Comm. H.R. 8070 Rep. 94-313 6/19/75 Appd. 6/24/75	Senate Comm. H.R. 8070 Rep. 94-326 7/24/75 Appd. 7/26/75	Conf. Comm. Appd. 9/23/75 Rep. 94-502 P.L. 94-116 10/17/75	Difference from Budget Submission	Difference from Authorization	
251	N-SPACE SHUTTLE FACILITIES (Cont'd)											
	Modifications for Crew Training Facilities (JSC).....	830	830	830	830	---	830	830	830	---	---	
	Modification of the Vibration and Acoustic Test Facility (JSC).....	2,410	2,410	2,410	2,410	---	2,410	2,410	2,410	---	---	
	Modifications for Solid Rocket Booster Component Manufacturing and Assembly Facilities.....	3,000	3,000	3,000	3,000	---	3,000	3,000	3,000	---	---	
252	B-REHABILITATION AND MODIFICATION OF FACILITIES AT VARIOUS LOCATIONS..	(16,000)	(16,000)	(16,000)	(16,000)	(---)	(16,000)	(16,000)	(16,000)	(---)	(---)	
253	B-MINOR CONSTRUCTION OF NEW FACILITIES AND ADDITIONS TO EXISTING FACILITIES AT VARIOUS LOCATIONS.....	(5,000)	(5,000)	(5,000)	(5,000)	(---)	(5,000)	(5,000)	(5,000)	(---)	(---)	
255	B-FACILITY PLANNING AND DESIGN.....	(9,275)	(13,775)	(9,275)	(13,775)	(+4,500)	(9,275)	(9,275)	(9,275)	(---)	(---)	

APP 911-418

B = NASA Comptroller Project.
M = Manned Space Flight Project.
R = Aeronautics and Space Technology Project.
S = Space Science Project.

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Code 377 Ext. 58466

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

Chronological History of the FY 1976 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 Budget Submission	House Comm. H.R. 4700 Rep. 94-63 3/14/75 Appd. 4/9/75	Senate Comm. H.R. 4700 Rep. 94-103 5/5/75 Appd. 5/12/75	Conf. Comm. Appd. 6/4/75 Rep. 94-259 P.L. 94-39 6/19/75	Difference from Budget Submission	House Comm. H.R. 8070 Rep. 94-313 6/19/75 Appd. 6/24/75	Senate Comm. H.R. 8070 Rep. 94-326 1/24/75 Appd. 7/26/75	Conf. Comm. Appd. 9/23/75 Rep. 94-502 P.L. 94-116 10/17/75	Difference from Budget Submission	Difference from Authorization	
RESEARCH AND PROGRAM MANAGEMENT APPROPRIATION	776,000	776,000	776,000	776,000	---	775,512	775,512	775,512	-488	-488	
BY INSTALLATION:											
Johnson Space Center....	125,196	125,196	125,196	125,196	---	*	*	*	*	*	
Kennedy Space Center....	94,974	94,974	94,974	94,974	---	*	*	*	*	*	
Marshall Space Flight Center.....	130,506	130,506	130,506	130,506	---	*	*	*	*	*	
National Space Tech- nology Laboratories... Goddard Space Flight Center.....	1,696	1,696	1,696	1,696	---	*	*	*	*	*	
105,847	105,847	105,847	105,847	---	*	*	*	*	*		
12,705	12,705	12,705	12,705	---	*	*	*	*	*		
49,257	49,257	49,257	49,257	---	*	*	*	*	*		
13,714	13,714	13,714	13,714	---	*	*	*	*	*		
90,710	90,710	90,710	90,710	---	*	*	*	*	*		
81,902	81,902	81,902	81,902	---	*	*	*	*	*		
69,493	69,493	69,493	69,493	---	*	*	*	*	*		
BY FUNCTION:											
Personnel.....	597,513	597,513	597,513	597,513	---	597,513	597,513	597,513	---	---	
Travel.....	17,001	17,001	17,001	17,001	---	17,001	17,001	17,001	---	---	
Facilities Services....	85,590	85,590	85,590	85,590	---	85,102	85,102	85,102	-488	-488	
Technical Services.....	33,871	33,871	33,871	33,871	---	33,871	33,871	33,871	---	---	
Administrative Support..	42,025	42,025	42,025	42,025	---	42,025	42,025	42,025	---	---	
SUPPLEMENTAL.....	19,986	16,800	16,800	16,800	-3,186	16,800	16,800	16,800	-3,186	---	
TOTAL, R&PM.....	795,986	792,800	792,800	792,800	-3,186	792,312	792,312	792,312	-3,674	-488	

GPO 911-476

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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

Chronological History of the Transition Period (July 1, 1976 - September 30, 1976)
(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 Budget Submission	House Comm. H.R. 4700 Rep. 94-63 3/14/75 Appd. 4/9/75	Senate Comm. H.R. 4700 Rep. 94-103 5/5/75 Ann'd. 5/12/75	Conf. Comm. Appd. 6/4/75 Rep. 94-259 P.L. 94-39 6/19/75	Difference from Budget Submission		House Comm. H.R. 8070 Rep. 94-313 6/19/75 Appd. 6/24/75	Senate Comm. H.R. 8070 Rep. 94-326 7/24/75 Appd. 7/26/75	Conf. Comm. Appd. 9/23/75 Rep. 94-502 P.L. 94-116 10/17/75	Difference from Budget Submission	Difference from Authorization
TOTAL APPROPRIATIONS:											
Research & Development..	730,600	700,600	704,600	700,600	-30,000		700,600	700,600	700,600	-30,000	---
Construction of Facilities.....	14,500	8,050	11,500	10,750	-3,750		10,750	10,750	10,750	-3,750	---
Research and Program Management.....	213,800	213,800	213,800	213,800	---		213,678	213,678	213,678	-122	-122
GRAND TOTAL.....	958,900	922,450	929,900	925,150	-33,750		925,028	925,028	925,028	-33,872	-122
R&D Appropriation:											
OMSF.....	376,600	*	*	*	*		*	*	*	*	---
OSS.....	160,300	*	*	*	*		*	*	*	*	---
OA.....	54,700	*	*	*	*		*	*	*	*	---
OAST.....	69,100	*	*	*	*		*	*	*	*	---
OEP.....	1,500	*	*	*	*		*	*	*	*	---
OTDA.....	66,400	*	*	*	*		*	*	*	*	---
OTU.....	2,000	*	*	*	*		*	*	*	*	---
TOTAL, R&D.....	730,600	700,600	704,600	700,600	-30,000		700,600	700,600	700,600	-30,000	---
CoF Appropriation:											
Comptroller.....	14,500	8,050	11,500	10,750	-3,750		10,750	10,750	10,750	-3,750	---
TOTAL, CoF.....	14,500	8,050	11,500	10,750	-3,750		10,750	10,750	10,750	-3,750	---
R&PM Appropriation:											
Subtotal, R&PM.....	213,800	213,800	213,800	213,800	---		213,678 ^{1/}	213,678 ^{1/}	213,678	-122	-122
Supplemental Appropriation.....	7,117	7,117	7,117	7,117	---		7,117	7,117	7,117	---	---
TOTAL, R&PM.....	220,917	220,917	220,917	220,917	---		220,795	220,795	220,795	-122	-122
TOTAL.....	966,017	929,567	937,017	932,267	-33,750		932,145	932,145	932,145	-33,872	-122

GPO 911-408

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^{1/} Decrease of \$122,000 reflects a ten percent reduction in the payment of GSA space rental charges.

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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

Chronological History of the Transition Period (July 1, 1976 - September 30, 1976)
(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 Budget Submission	House Comm. H.R. 4700 Rep. 94-63 3/14/75 Appd. 4/9/75	Senate Comm. H.R. 4700 Rep. 94-103 5/5/75 Appd. 5/12/75	Conf. Comm. Appd. 6/4/75 Rep. 94-259 P.L. 94-39 6/19/75	Difference from Budget Submission			House Comm. H.R. 8070 Rep. 94-313 6/19/75 Appd. 6/24/75	Senate Comm. H.R. 8070 Rep. 94-326 7/24/75 Appd. 7/26/75	Conf. Comm. Appd. 9/23/75 Rep. 94-502 P.L. 94-116 10/17/75	Difference from Budget Submission
RESEARCH AND DEVELOPMENT..	730,600	700,600	704,600	700,600	-30,000		700,600	700,600	700,600	-30,000	---
Space Shuttle.....	321,000	*	*	*	*		*	*	*	*	---
Space Flight Operations.	55,100	*	*	*	*		*	*	*	*	---
Advanced Missions.....	500	*	---	*	*		*	*	*	*	---
Physics and Astronomy...	46,600	*	*	*	*		*	*	*	*	---
Lunar and Planetary.....	73,300	*	*	*	*		*	*	*	*	---
Launch Vehicle Proc.....	40,400	*	*	*	*		*	*	*	*	---
Space Applications.....	54,700	*	*	*	*		*	*	*	*	---
Aeronautical Research and Technology.....	46,800	46,800	*	*	*		*	*	*	*	---
Space and Nuclear Re- search and Technology.	22,300	*	*	*	*		*	*	*	*	---
Energy Technology Applications.....	1,500	*	*	*	*		*	*	*	*	---
Tracking and Data Acq...	66,400	*	*	*	*		*	*	*	*	---
Technology Utilization..	2,000	*	*	*	*		*	*	*	*	---
CONSTRUCTION OF FACILITIES	14,500	8,050	11,500	10,750	-3,750		10,750	10,750	10,750	-3,750	---
Rehabilitation and Mod....	8,750	4,000	7,000	7,000	-1,750		7,000	7,000	7,000	-1,750	---
Minor Construction.....	2,950	1,250	2,000	1,250	-1,700		1,250	1,250	1,250	-1,700	---
Facility Planning and Design.....	2,800	2,800	2,500	2,500	-300		2,500	2,500	2,500	-300	---
RESEARCH AND PROGRAM MANAGEMENT.....	220,917	220,917	220,917	220,917	---		220,795	220,795	220,795	-122	-122
Basic Submission.....	213,800	213,800	213,800	213,800	---		213,678	213,678	213,678	-122	-122
Supplemental.....	7,117	7,117	7,117	7,117	---		7,117	7,117	7,117	---	---
TOTAL.....	966,017	929,567	937,017	932,267	-33,750		932,145	932,145	932,145	-33,872	-122

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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

Chronological History of the Transition Period (July 1, 1976 - September 30, 1976)
(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 AND DEVELOPMENT APPROPRIATION:	730,600	700,600	704,600	700,600	-30,000		700,600	700,600	700,600	-30,000	(---)
OFFICE OF MANNED SPACE FLIGHT.....	376,600	*	*	*	*		*	*	*	*	*
Space Shuttle Program.....	(321,000)	(*)	(*)	(*)	(*)		(*)	(*)	(*)	(*)	(*)
Orbiter.....	230,900										
Main Engine.....	36,000										
Solid Rocket Boosters...	18,000										
External Tank.....	15,100										
Launch and Landing.....	21,000										
Space Flight Operations Program.....	(55,100)	(*)	(*)	(*)	(*)		(*)	(*)	(*)	(*)	(*)
Development, Test and Mission Operations....	43,200										
Space Life Sciences.....	5,500										
Mission Systems and Integration.....	6,400										
Advanced Missions Program.	(500)	(*)	(---)	(*)	(*)		(*)	(*)	(*)	(*)	(*)
Advanced Mission Studies	500										
OFFICE OF SPACE SCIENCE...	160,300	*	*	*	*		*	*	*	*	*
Physics and Astronomy Program.....	(46,600)	(*)	(*) ^{1/}	(*)	(*)		(*) ^{2/}	(*)	(*)	(*)	(*)
Large Observatories.....	13,500										
Orbiting Explorers.....	11,000										
Suborbital Programs.....	7,500										
Supporting Activities...	11,100										
Spacelab Science Program.....	3,500										

GPO 911-408

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^{1/} Designated an additional \$4 million to be applied to the Upper Atmospheric Research Activity.

^{2/} Large Space Telescope reduced \$1,000,000.

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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

Chronological History of the Transition Period (July 1, 1976 - September 30, 1976)
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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 Budget Submission	House Comm. H.R. 4700 Rep. 94-63 3/14/75 Appd. 4/9/75	Senate Comm. H.R. 4700 Rep. 94-103 5/5/75 Appd. 5/12/75	Conf. Comm. Appd. 6/4/75 Ref. 94-259 P.L. 94-39 6/19/75	Difference from Budget Submission			House Comm. H.R. 8070 Rep. 94-313 6/19/75 appd. 6/24/75	Senate Comm. H.R. 8070 Rep. 94-326 7/24/75 Appd. 7/26/75	Conf. Comm. Appd. 9/23/75 Rep. 94-502 P.L. 94-116 10/17/75	Difference from Budget Submission
Lunar and Planetary Exploration Program.....	(73,300)	(*)	(*)	(*)	(*)		(*)	(*)	(*)	(*)	(*)
Viking.....	14,000										
Outer Planets Missions..	22,600										
Pioneer/Hellos.....	16,300										
Supporting Research and Technology/Advanced Studies.....	3,600										
Planetary Astronomy.....	1,100										
Data Analysis.....	400										
Planetary Quarantine....	400										
Planetary Flight Support	8,800										
Lunar Research Program..	6,100										
Launch Vehicle Procure- ment Program.....	(40,400)	(*)	(*)	(*)	(*)		(*)	(*)	(*)	(*)	(*)
Scout.....	3,400										
Centaur.....	26,400										
Delta.....	10,300										
Supporting Research and Technology/Advanced Studies.....	300										
OFFICE OF APPLICATIONS.....	54,700	*	*	*	*		*	*	*	*	*
Space Applications Program.....	(54,700)	(*)	(*)	(*)	(*)		(*)	(*)	(*)	(*)	(*)
Weather and Climate.....	11,700										
Pollution Monitoring....	8,700										
Earth Resources Survey..	15,000										
Earth and Ocean Physics..	7,800										
Space Processing.....	1,200										
Communications.....	2,000										
Data Management.....	1,500										
Shuttle Payloads.....	1,500										
Advanced Applications Flight Experiments....	1,300										
Applications Systems Analyses.....	1,400										
Applications Explorer Missions.....	2,600										

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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

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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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<u>OFFICE OF AERONAUTICS AND SPACE TECHNOLOGY...</u>	69,100	*	*	*	*		*	*	*	*	*
Aeronautical Research and Technology Program.....	(46,800)	(46,800)	(*)	(*)	(*)		(*)	(*)	(*)	(*)	(*)
Research and Technology Base.....	23,800	23,800									
Systems Studies.....	700	700									
Systems Technology Programs.....	15,800	15,800									
Experimental Programs..	6,500	6,500									
Space and Nuclear Re- search and Technology Program.....	(22,300)	(*)	(*)	(*)	(*)		(*)	(*)	(*)	(*)	(*)
Research and Technology Base.....	18,500										
Systems Studies.....	400										
Systems Technology Programs.....	800										
Experimental Programs..	1,100										
Low Cost Systems Program.....	1,500										
<u>OFFICE OF ENERGY PROGRAMS</u>	1,500	*	*	*	*		*	*	*	*	*
Energy Technology Applications Program...	(1,500)	(*)	(*)	(*)	(*)		(*)	(*)	(*)	(*)	(*)
Energy Research and Technology.....	550										
Energy Applications....	750										
Systems Analysis.....	200										
<u>OFFICE OF TRACKING AND DATA ACQUISITION.....</u>	66,400	*	*	*	*		*	*	*	*	*
Tracking and Data Acquisition Program....	(66,400)	(*)	(*)	(*)	(*)		(*)	(*)	(*)	(*)	(*)
Operations.....	51,200										
Systems Implementation.	12,900										
Advanced Systems.....	2,300										

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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

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(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 Budget Submission	House Comm. H.R. 4700 Rep. 94-63 3/14/75 Appd. 4/9/75	Senate Comm. S.R. 4700 Rep. 94-103 5/5/75 Appd. 5/12/75	Conf. Comm. Appd. 6/4/75 Rep. 94-259 P.L. 94-39 6/19/75	Difference from Budget Submission		House Comm. H.R. 8070 Rep. 94-313 6/19/75 Appd. 6/24/75	Senate Comm. H.R. 8070 Rep. 94-326 7/24/75 Appd. 7/26/75	Conf. Comm. Appd. 9/23/75 Rep. 94-502 P.L. 94-116 10/17/75	Difference from Budget Submission	Difference from Authorization
OFFICE OF INDUSTRY AFFAIRS AND TECHNOLOGY UTILIZATION.....	2,000	*	*	*	*		*	*	*	*	*
Technology Utilization Program.....	(2,000)	(*)	(*)	(*)	(*)		(*)	(*)	(*)	(*)	(*)
Industrial Applications Technology Applications Program Control and Evaluation.....	850 950 200										

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*Undistributed

Prepared by:

NASA Comptroller
Office of Budget
Operations
Code BTF Ext. 58466

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

Chronological History of the Transition Period (July 1, 1976 - September 30, 1976)
(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 Budget Submission	House Comm. H.R. 4700 Rep. 94-63 3/14/75 Appd. 4/9/75	Senate Comm. H.R. 4700 Rep. 94-103 5/5/75 Appd. 5/12/75	Conf. Comm. Appd. 6/4/75 Rep. 94-259 P.L. 94-39 6/19/75	Difference from Budget Submission		House Comm. H.R. 8070 Rep. 94-313 6/19/75 Appd. 6/24/75	Senate Comm. H.R. 8070 Rep. 94-326 7/24/75 Appd. 7/26/75	Conf. Comm. Appd. 9/23/75 Rep. 94-502 P.L. 94-116 10/17/75	Difference from Budget Submission	Difference from Authorization
CONSTRUCTION OF FACILITIES APPROPRIATION:	14,500	8,050	11,500	10,750	-3,750		10,750	10,750	10,750	-3,750	---
B-REHABILITATION AND MODIFICATION OF FACILITIES AT VARIOUS LOCATIONS..	(8,750)	(4,000)	(7,000)	(7,000)	(-1,750)		(7,000)	(7,000)	(7,000)	(-1,750)	(---)
B-MINOR CONSTRUCTION OF NEW FACILITIES AND ADDITIONS TO EXISTING FACILITIES AT VARIOUS LOCATIONS.....	(2,950)	(1,250)	(2,000)	(1,250)	(-1,700)		(1,250)	(1,250)	(1,250)	(-1,700)	(---)
B-FACILITY PLANNING AND DESIGN.....	(2,800)	(2,800)	(2,500)	(2,500)	(-300)		(2,500)	(2,500)	(2,500)	(-300)	(---)

GPO 911-409

B = NASA Comptroller Project.

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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

Chronological History of the Transition Period (July 1, 1976 - September 30, 1976)
(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 Budget Submission	House Com. H.R. 4700 Rep. 94-63 3/14/75 Appd. 4/9/75	Senate Com. S.R. 4700 Rep. 94-103 5/5/75 Appd. 5/12/75	Conf. Com. Appd. 6/4/75 Rep. 94-259 P.L. 94-39 6/19/75	Difference from Budget Submission		House Com. H.R. 8070 Rep. 94-313 6/19/75 Appd. 6/24/75	Senate Com. H.R. 8070 Rep. 94-326 7/24/75 Appd. 7/26/75	Conf. Com. Appd. 9/23/75 Rep. 94-302 P.L. 94-110 10/17/75	Difference from budget Submission	Difference from Authorization
RESEARCH AND PROGRAM MANAGEMENT APPROPRIATION	213,800	213,800	213,800	213,800	---		213,678	213,678	213,678	-122	-122
BY INSTALLATION:											
Johnson Space Center....	34,966	34,966	34,966	34,966	---	*	*	*	*	*	
Kennedy Space Center....	29,753	29,753	29,753	29,753	---	*	*	*	*	*	
Marshall Space Flight Center.....	34,372	34,372	34,372	3,372	---	*	*	*	*	*	
National Space Tech- nology Laboratories...	423	423	423	423	---	*	*	*	*	*	
Goddard Space Flight Center.....	27,740	27,740	27,740	27,740	---	*	*	*	*	*	
Wallops Flight Center....	3,543	3,543	3,543	3,543	---	*	*	*	*	*	
Ames Research Center....	12,749	12,749	12,749	12,749	---	*	*	*	*	*	
Flight Research Center..	4,907	4,907	4,907	4,907	---	*	*	*	*	*	
Langley Research Center..	23,387	23,387	23,387	23,387	---	*	*	*	*	*	
Lewis Research Center....	21,936	21,936	21,936	21,936	---	*	*	*	*	*	
NASA Headquarters.....	20,024	20,024	20,024	20,024	---	*	*	*	*	*	
BY FUNCTION:											
Personnel.....	156,759	156,759	156,759	156,759	---	156,759	156,759	156,759	---	---	
Travel.....	5,065	5,065	5,065	5,065	---	5,065	5,065	5,065	---	---	
Facilities Services.....	28,850	28,850	28,850	28,850	---	28,728	28,728	28,728	-122	-122	
Technical Services.....	10,230	10,230	10,230	10,230	---	10,230	10,230	10,230	---	---	
Administrative Support..	12,896	12,896	12,896	12,896	---	12,896	12,896	12,896	---	---	
SUPPLEMENTAL.....	7,117	7,117	7,117	7,117	---	7,117	7,117	7,117	---	---	
TOTAL, R&PM.....	220,917	220,917	220,917	220,917	---	220,795	220,795	220,795	-122	-122	

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AUTHORIZING APPROPRIATIONS TO THE NATIONAL
AERONAUTICS AND SPACE ADMINISTRATION

MARCH 14, 1974.—Committed to the Committee of the Whole House on the
State of the Union and ordered to be printed

Mr. TEAGUE, from the Committee on Science and Technology,
submitted the following

REPORT

[To accompany H.R. 4700]

The Committee on Science and Astronautics, to whom was referred the bill (H.R. 4700) 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, 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 1976, and transition period, as follows:

Programs	Authorization	
	Fiscal year 1976	Transition period
Research and development	\$2,684,180,000	\$709,600,000
Construction of facilities	125,693,000	8,050,000
Research and program management	776,000,000	213,800,000
Total	3,585,873,000	922,450,000

COMMITTEE ACTIONS

RESEARCH AND DEVELOPMENT

SPACE FLIGHT OPERATIONS

NASA requested \$207,100,000 for Space Flight Operations in Fiscal Year 1976. Within this line item, your Committee made two changes which result in a total recommended authorization of \$203,100,000 for Space Flight Operations for Fiscal Year 1976. The changes are as follows:

Development, Test and Mission Operations.—The Committee reviewed the Fiscal Year 1975 request for Development, Test and Mission Operations, compared this request to the \$5 million reduction made and to the subsequent Operating Plan of NASA transferring an additional \$2.0 million from this item. The Committee concluded from this funding history and noting the availability in early 1976 of NASA funds defer by the President from Fiscal Year 1975 that a reduction of \$5 million would not adversely affect NASA programs. Therefore, the Committee recommends a total of \$161,100,000 for Development, Test and Mission Operations for Fiscal Year 1976, a reduction of \$5,000,000 from the NASA request.

Mission Systems and Integration.—NASA requested \$22,000,000 for Mission Systems and Integration in Fiscal Year 1976. The Committee notes that NASA deferred the start of a number of efforts in the Advanced Development portion of this program in Fiscal Year 1975 which would contribute to cost savings and cost avoidance in high technology areas. NASA requested \$6.5 million in Fiscal Year 1976 for Advanced Development. To reduce the normal lead time of three to four years in this highly technical effort the Committee increased the request \$1.0 million to \$7.5 million for Advanced Development noting that increased effort in orbital operations, communication and information system technologies will lead to lower cost space operations. The Committee, therefore, recommends a total of \$7,500,000 for Advanced Development in Mission Systems and Integration for Fiscal Year 1976 an increase of \$1,000,000 to the NASA request.

ADVANCED MISSIONS

NASA requested \$1,500,000 for the Advanced Missions Program for Fiscal Year 1976. The Committee notes that relatively modest expenditures in this area lead to more efficient and lower cost space operations and payloads as well as improved program definition and planning. The Committee believes that increased studies in large space structures, manned orbital system concepts and on-orbit main-

tenance are among those effort particularly worthy of more effort. Therefore, your Committee increased the Advanced Mission Program by \$1,500,000 to a total of \$3,000,000 for Fiscal Year 1976.

PHYSICS AND ASTRONOMY

NASA requested \$155,800,000 for Physics and Astronomy. The Committee recommends an increase of \$1,000,000 for a total authorization of \$156,800,000. The increase is to accelerate NASA's Stratospheric Program.

Stratospheric Research.—There is an increasing scientific and public concern that various pollutants, if introduced into the stratosphere, may decrease the ozone which protects humans from ultraviolet radiation. Some of the compounds of concern are the oxides of nitrogen from the exhausts of the subsonic jet fleet and from a potential fleet of supersonic transports. Other compounds of concern are the chloro-fluoromethanes (Freons) from spray cans and air conditioners and the hydrogen chloride from the Titan and Space Shuttle solid rocket motors.

Current scientific understanding of the problem is hampered by a lack of direct stratospheric measurements. Consequently the wide uncertainties in the theories lead to assessments ranging from "there is no problem" to "there may be a problem". NASA is expanding its program of stratospheric research. With its capabilities using high flying aircraft, balloons, sounding rockets and satellites, NASA can take the lead in conducting critical experiments and measurements in the stratosphere.

The most crucial stratospheric measurements currently lacking are measurements of the chlorine compounds. The Committee has included funds so that NASA will utilize the recommended \$1,000,000 increase to accelerate progress on the measurement of chlorine in the stratosphere.

LUNAR AND PLANETARY EXPLORATION

NASA requested \$259,900,000 for Lunar and Planetary Exploration. The Committee recommends a decrease of \$1,000,000 in the Lunar Research Program.

Lunar Research.—The Lunar Research program analyzes the large amounts of data available from the lunar flight programs, ground-based studies of the moon, and laboratory investigations. The program also supports the Lunar Science Institute adjacent to Johnson Space Center. Work to date has revolutionized prior scientific theories about the moon.

The Lunar Research program budget in Fiscal Year 1974 was \$17,450,000. The FY 1975 current estimate is \$21,904,000. The NASA FY 1976 request is \$24,700,000. The Committee is not persuaded that a vigorous Lunar Research program requires the full amount requested. The Committee recommends a FY 1976 budget of \$23,700,000 which is a \$1,000,000 decrease from the NASA request.

SPACE APPLICATIONS

The Subcommittee approved the full amount of the NASA request of \$175,030,000 for the Space Applications area, and added \$6,500,000 for emphasis in five disciplines. The specific areas are:

(A) *Weather and Climate.*—\$1.0 million for Severe Storm Research.

(B) *Earth Resources Survey.*—\$1.5 million for increased Applications Systems Verification Tests.

(C) *Communications.*—\$1.0 million for Experiment Coordination and Operations Support to additional users of ATS and CAS-C Satellites. \$1.0 million for Advanced Communications Research for expanded basic research in areas such as high power frequency transmission etc.

(D) *Data Management.*—\$1.0 million for research in additional Data Interpretation Techniques, Special Investigations and Data Analysis.

(E) *Shuttle Payloads.*—\$1.0 million to permit detailed definition and early flight test experiments for Shuttle payloads.

The increase to the Space Applications request in each instance reflects the Committee's desire to take full advantage of the scientific and technical talent, expertise and facilities that exist within NASA. Therefore, the Committee recommends \$181,530,000 for the Space Applications line item for fiscal year 1976.

SPACE AND NUCLEAR RESEARCH AND TECHNOLOGY

The Committee added \$2,000,000 to the NASA budget request of \$74,900,000 for the Space and Nuclear Research and Technology area in order to accelerate the Research and Technology base in two specific areas:

Space Propulsion and Power Systems.—\$1.0 million to accelerate the high pressure hydrogen propulsion system breadboard tests plus other important tests.

Materials and Structures Technology.—\$1.0 million to expand and accelerate the high temperature composites program.

The Committee noted that this addition of \$2,000,000 will enhance NASA's efforts in these two critical technology areas. Therefore, the Committee recommends \$76,900,000 for the Space and Nuclear Research Technology area for Fiscal Year 1976.

TRACKING AND DATA ACQUISITION PROGRAM

The Committee decreased the Tracking and Data Acquisition Program budget request of \$243,000,000 for FY 1976 by \$2,200,000 in the following areas:

Operations.—A decrease of \$1,000,000. The Committee took note of the potential termination of coverage of some 16 satellite programs

from the Spaceflight Tracking and Data Network workload plan for the upcoming fiscal year and felt the Data Processing Operation had sufficient funds to perform its role.

Advanced Missions.—A decrease of \$1,200,000. The Committee recommended this decrease to reflect its concern over the constant level requests in Advanced Systems for the last few years, noting that a decrease was warranted because of TDRSS program maturity.

Therefore, the Committee recommends a total of \$240,800,000 for the Tracking and Data Acquisition Program for fiscal year 1976.

TECHNOLOGY UTILIZATION

The Committee approved the NASA FY 1976 Authorization request of \$7,000,000 and added \$2,000,000 more to two specific areas. These additions bring the amount recommended by the Committee to \$9,000,000 for fiscal year 1976.

Technology Applications.—\$1,000,000 to provide acceleration to the effort of formulation of NASA application teams to work with the public. The additional funds will also support Biomedical Applications Engineering projects plus Urban Construction, Safety and Transportation activities.

Space Benefits Analysis Documentation.—\$1,000,000 approved to accelerate the analysis documentation to be disseminated to the public sector and potential industrial users. It will also provide for Industrial Application expansion in the Northwest and Southeast as well as Extension of Services to industry.

RESEARCH AND DEVELOPMENT TRANSITION PERIOD

NASA requested \$730,600,000 for all research and development in the Transition Period to adjust to the new fiscal year cycle. This request exceeds NASA average quarterly expenditure for Fiscal Year 1976 by two and one tenth percent. Your Committee considering this and the factors of probable continued inflation and a carry over of deferred funds from Fiscal Year 1975, reduced the overall request by \$30,000,000. The reduction is to be applied at the discretion of NASA management. It was the Committee's judgment that sufficient planning lead time exists such that prudent management could absorb this reduction without detriment to any programs. Therefore, the Committee recommends an overall reduction of \$30,000,000 to Research and Development in the Transition Period (excluding Aeronautical Research and Technology) for a total of \$700,600,000 in the Transition Period.

CONSTRUCTION OF FACILITIES

For fiscal year 1976 NASA requested \$84,620,000 (including aeronautical research facilities). Of the request \$47.2 million was for shuttle related facilities; \$7.1 million for discrete non-shuttle related facilities; and \$30.3 million for agency-wide facilities and advance facility design.

The Committee, after having made several adjustments to the NASA Authorization request, recommends that a total of \$125,693,000 be authorized for Construction of Facilities for Fiscal Year 1976. Committee amendments to the Authorization Bill were as follows:

Johnson Space Center.—NASA requested \$2,490,000 for the construction of a two story 15,000 square foot addition to the Lunar Sample Curatorial Facility. The justification for the new facility is based on the need to provide a structure that is more resistant to hurricanes, tornadoes, flooding, vandalism or sabotage; one that provides more laboratory space for visiting scientists; and one that will more adequately accommodate present and proposed processing requirements.

In the absence of a detailed site selection study as to where this activity should be located, and in view of the relatively large sums of money which have been spent at the Johnson Space Center for facilities to receive, process, isolate, store and analyze lunar samples (approximately \$19.0 million), the Committee recommends that the request be deferred until such time as a detailed study has been completed concerning the disposition of samples and the need and location for curatorial activities.

Kennedy Space Center.—NASA proposed a project entitled "Modifications for Hypergolic Checkout and Refurbishment Facilities" in the amount of \$6,940,000. This project provides for rehabilitation and modifications to five existing buildings in the fluid test complex at Kennedy, which were formerly used to support the Apollo and Gemini Programs. This project will provide a capability to decontaminate, maintain, refurbish and store hypergolic propellant modules used on the orbiter. A remote site is required to accomplish these hazardous operations.

Three of the buildings require extensive modifications and will require 30-34 months to complete. The other two buildings require relatively minor modifications and can be accomplished in a much shorter period. The Committee considers that the work on these latter two buildings can be authorized at a later date, and accordingly recommends deferral of that portion of the work in the amount of \$637,000.

Flight Research Center and Air Force Plant #42, Palmdale.—For FY 1976 NASA has proposed a project for the Construction of Orbiter Approach and Landing Test Facilities in the amount of \$1,680,000. This project is a continuation of work provided for in FY 1975 to meet the requirements associated with the horizontal flight test program for the orbiter.

Included in the FY 1976 project is a requirement for four structures and eight generator shelters to house the microwave scanning beam landing system which is designed to provide an automatic landing capability for the orbiter. Based upon testimony received, there is some question as to whether mobile equipment will be used or a fixed installation will be necessary for the approach and landing tests. The Committee recommends deferral of that part of the project involving these structures, estimated at \$300,000, until such time as a firm decision is made. Fund transfer authority is available should a decision be made in this regard prior to the next authorization request.

Ames Research Center.—Built in the early 1940's, the 40-by-80 Foot Subsonic Wind Tunnel has been a major contributor to many U.S. aircraft developments—both civil and military. The Committee determined there is an urgent need to provide an increased capability for full-scale testing of various advanced types of aeronautical vehicles.

The new capability would provide an increase in test speed from 200 knots to 300 knots by replacing the existing wind tunnel drive motors and fans with new, more powerful ones. This capability would permit the testing of advanced rotorcraft at their higher cruise speeds and full-scale wind tunnel testing of V/STOL (Vertical and Short Take-Off and Landing) aircraft.

This requirement has become critical during the past decade, during which both civil and military rotorcraft have advanced significantly in speed capability; and, consequently, they can no longer be adequately evaluated in any existing test facility. The limitations of current test facilities were recognized in 1967 by the Aeronautics and Astronautics Coordinating Board (AACB) when it initiated studies that have ultimately led to this plan to repower the 40-by-80 Foot Wind Tunnel.

As noted above, this facility is needed primarily to study low-speed (up to 300 knots) flight characteristics of rotorcraft. In civil aviation, such studies are important in minimizing structural, and associated safety problems, in reducing aircraft noise during landing and takeoff, and in improving flight performance of airplanes in congested terminal areas; these are all factors that strongly affect the impact of air transportation systems on their environmental surroundings and on total energy consumption. Military operations also impose stringent requirements on landing and takeoff performance and on satisfactory low-speed flight characteristics for rotorcraft and V/STOL aircraft. Unquestionably, the proposed facility modifications will enable development of significantly improved aircraft systems in both civil and military sectors.

The economic justification for this full-scale wind tunnel test facility lies in the demonstrated savings that have accrued in aircraft development programs when full-scale wind tunnel tests were conducted early in the development program and before the expensive commitment to flight tests. Discovering problems during the flight test program has sometimes had catastrophic consequences. For example, the AH-56A Cheyenne Helicopter program, which did not include full-scale wind tunnel tests, was terminated after a \$400 million investment, against which the cost of this facility modification appears reasonable indeed. Three other rotorcraft types (XV-1, XH-51A, and XV-5) failed during wind tunnel tests and before flight tests. All of these failures involved the complicated interface between aerodynamics, dynamics, and structures. Therefore, tests of the full-scale hardware were the only way that these problems could have been discovered. Two of the three aircraft which failed during wind tunnel testing consequently underwent design changes, modifications, more testing in the wind tunnel, and then completed successful flight tests. One—the XH-51A—later established a new rotorcraft speed record. The XV-5A is currently considered to be one of the most promising high performance V/STOL airplanes.

In summary, the future successful developmental testing of civil and military advanced rotorcraft and V/STOL aircraft requires that the 40-by-80 Foot Wind Tunnel be repowered to increase the maximum wind speed from 200 to 300 knots. By initiating the procurement of the long-lead procurements in fiscal year 1976, the repowered facility will be operable during the third quarter of 1978. The Committee recommends an additional \$12,500,000 to undertake this vital project.

Langley Research Center.—The Committee recognized that there is an urgent need, established over a number of years, for a new ground based capability for aerodynamic testing at transonic speeds under conditions more closely resembling actual flight conditions than is now possible.

This need can be met by the construction of a high Reynolds number transonic tunnel which will satisfy the research needs of NASA, the military and industry. The facility will provide a much needed capability to test a broad spectrum of aeronautical and space vehicles.

The need for this facility is supported by the U.S. Department of Defense and the U.S. aerospace community. (The Europeans also recognize the need and are working on the problem of how and where to establish such a facility). This need stems from the recognition that experimental data obtained from existing low Reynolds number transonic wind tunnels often lead to erroneous conclusions on flight vehicle performance predictions.

Mistakes in performance predictions can result in inefficient operations. As an example, excessive fuel consumption can lead to the waste of millions of gallons of fuel for a fleet of aircraft. Another even more costly and tragic type of mistake in design predictions leads to aircraft failure. The result may be abandonment of the program before production at the least or crashes and accidents after the aircraft enters service.

A wind tunnel which will permit accurate experimental measurements at transonic speeds approaching flight Reynolds number is, therefore, necessary to the continuing development of high-speed aircraft technology which is the base for national leadership in safe, efficient, energy conservative aircraft designs and for the superiority of U.S. military flight vehicles. Thus, the urgency for the new testing capability stems from the objective of retaining national leadership and needs which suggests that this facility should be available at the earliest possible time.

Therefore, the Committee determined that construction of the facility should begin in Fiscal Year 1976 and recommends the addition of \$27,500,000.

Facility Planning and Design.—NASA requested \$9,275,000 for the planning and design of various projects. To this amount, the Committee recommends the addition of \$4,500,000 for planning and design work associated with the two projects discussed in detail above: the 40-by-80-foot Subsonic Wind Tunnel modification and initiation of the High Reynolds Number Transonic Research Tunnel.

Of the increase, \$1,500,000 is for studies and final design of the 40-by-80-foot Subsonic Wind Tunnel modification. The studies and final design work for the Transonic Research Tunnel require an amount of \$3,000,000.

CONSTRUCTION OF FACILITIES—TRANSITION PERIOD

For the transition period, July 1, 1976 through September 30, 1976, NASA has requested no new authorization for discrete projects. However, authorization has been requested for agency-wide "packages" totalling \$14.5 million broken down as follows:—\$8,750,000 for Rehabilitation and Modification; \$2,950,000 for Minor Construction; and \$2,800,000 for Facility Planning and Design.

The Committee recommends that Facility Planning and Design be approved at the level requested since it provides a basis for better estimates for future construction projects.

However, the Committee considers that the Rehabilitation, Modification and Minor Construction work proposed should proceed at the same rate as for fiscal year 1976. Accordingly, the Committee recommends that the requests for Rehabilitation and Modification be reduced by \$4,750,000, and Minor Construction by \$1,700,000. This will result in a total authorization for construction during the transition period of \$8,050,000.

LANGUAGE AMENDMENTS

The Committee, in addition to the foregoing amendments to specific monetary line items of the bill, has further amended the bill to incorporate the following:

Section 6.—The Bill contains language enabling NASA to proceed with a contract for Tracking and Data Relay Satellite services when so provided in an Appropriation Act. The Committee added language to clarify title to properties—either facilities or hardware, which may accrue from the development and operation of a Tracking and Data Relay Satellite System. The Committee inserted the clarifying language to assure NASA an option to purchase and take title to such properties at the conclusion of such services.

Section 7.—The proposed legislation referred to the Committee included language which would authorize to the National Aeronautics and Space Administration, funds in the amount of \$958,900,000 for the Transition Period, July 1, 1976 to September 30, 1976. The amounts to be authorized were proposed in three lump sum amounts for Research and Development, Construction of Facilities, and Research and Program Management.

As indicated previously in this report, the Committee adjusted the amounts to be authorized recommending a total of \$922,450,000 for these purposes.

The Committee further amended Section 7 of the bill to enumerate sub-items making up the amount to be authorized for Section 7a. Research and Development and Section 7b. Construction of Facilities. Section 7(c). Research and Program Management was retained in the legislation as a lump sum amount, since this is the normal method of authorizing funds for these purposes.

The Committee also amended the provision to:

(a) Stipulate that the reductions to be made to the Research and Development authorization for the Transition Period would be applicable to all sub-line items except aeronautical research and development.

(b) Assure that all limitations, transfer authorities, and other provisions of the Act which are applicable to the amounts to be authorized for fiscal year 1976, would likewise be applicable to those amounts to be authorized for the Transition Period. In this connection, permissible transfers within the Construction of Facilities authorization (Section 7(b)) should be in conformance with normal procedures established for reprogramming actions of this nature.

Section 8.—On December 13, 1973, NASA issued a Management Instruction on the subject of "Early Domestic Dissemination of Technical Information." In issuing the instruction, NASA stated that it applied only to technical data and information and that it was NASA policy to provide potential domestic users early access.

One of the objectives of NASA as set forth in Section 102(c), paragraph (5) of the National Aeronautics and Space Act of 1958 as amended, is the "preservation of the role of the U.S. as a leader in aeronautical and space science and technology and in the application thereof to the conduct of peaceful activities within and outside the atmosphere." NASA contends that in recent years U.S. leadership in certain product areas has been weakened by the rapid technical progress of other countries. In view of this situation it has been determined to be in the national interest to facilitate early domestic dissemination to potential U.S. users, while taking steps to delay, for a limited period, the export of such information.

A question can be raised as to whether or not this policy is consistent with the Freedom of Information Act and its amendments (P.L. 83-487 and P.L. 93-502—Section 552 of Title 5, United States Code). NASA testified that its legal basis for the early dissemination program rested on two exemption categories of the Freedom of Information Act—specifically those provisions (1) dealing with information exempted by law, and (2) trade secrets or other confidential, commercial and financial information.

More specifically, the legal foundation for the procedure was described by NASA as follows: NASA delays public publication of the technical information so that if someone plans to export the information, a license to export it would be required either from the Department of State (under the Mutual Security Act of 1954, 22 U.S.C. 1934) or the Department of Commerce (under the Export Administration Act of 1969, 50 U.S.C. App. 2401-2413).

NASA emphasized that the early dissemination procedures apply only to technical and scientific information and not to other agency records, and that eventually even the technical information is released without restriction. The argument can be advanced that the Congressional purpose of the Freedom of Information Act was to "get sunshine in government," and not to permit aliens or even U.S. citizens to obtain valuable property without paying for it. More generally, the courts have been striking a balance between what citizens ought to have and what they do not need to have.

In summary, NASA believes there is a legal basis for its early dissemination policy and that it could successfully resist a request by an alien for the technical information prior to its general publication. However, this legal point has not been tested in the courts and thus is not settled. The Committee amendment would provide a much more

clear statutory basis for NASA's early dissemination procedures. It would invoke an exemption category of the Freedom of Information Act which provides for information being exempted by law from the act's general provisions.

Clause (a) of the proposed amendment would reverse the results of a D.C. Court of Appeals case, *Washington Research Project v. HEW*, in which it was held that research proposals from non-commercial institutions must be released under the Freedom of Information Act. The basis for the court's ruling was that the exemption granted under the Freedom of Information Act dealing with "trade secrets and other confidential, commercial and financial information" did not apply to research proposals from non-commercial institutions. NASA's present policy is not to release proprietary data contained in proposals received from either commercial or non-commercial sources. Clause (a) would clarify its right to retain in confidence information submitted in confidence.

COMMITTEE VIEWS

NASA ADMINISTRATIVE AND PROGRAM PLANNING

The information presented to the Committee confirms the need on the part of NASA to review its institutional allocations of programs and strengthen its program planning activities. The Committee notes that the current review by an ad hoc committee on the future outlook for space and the establishment of senior level positions in NASA for programs and institutional management are steps in the right direction. It is the view of the Committee that further concerted effort should be initiated by the Administrator of NASA to assure that the highest possible ratio of agency funds are devoted to non-duplicative programs and research as opposed to institutional support and services. Strengthening of the future program activities with particular emphasis on utilitarian applications, in the Committee's view, is essential to these goals.

APPLICATION PROGRAM PLANNING

It is the sense of the Committee that NASA take a more affirmative approach to the planning of Application missions with a view toward the ultimate user.

As evidenced by Application programs such as LANDSAT (Formerly ERTS) and the Advanced Technology Satellite Program (ATS-6), NASA has yet to provide a long range plan for the ultimate conversion of Applications programs from an experimental program effort to an operational system in either the public or private sector.

The Committee notes that the SEASAT program is NASA's first attempt to involve the ultimate users in the program from its inception. NASA is to be commended for this first step. However, the Committee observes that greater effort to assess user requirements needs to be a part of every NASA Applications program.

Therefore, the Committee requests that NASA adopt a policy of providing the Committee with long range plans for the ultimate use of each Applications satellite program, wherever practical, at the time of requesting the new start.

NASA ENERGY RESEARCH

NASA has achieved a rare blend of high-technology and managerial expertise. For years it has applied its talents to coping with a wide range of problems facing man; e.g., special medical problems, improved crime detection equipment and advanced fire fighting techniques. It is now time for NASA to lend its assistance to overcoming

the energy crisis. NASA is in the unique position of being comfortable with advanced technology and also of having the ability to appreciate the overall situation. It can focus in on narrow technological points but not lose sight of the ultimate goal. NASA can make positive contributions by demonstrating the technical viability of many well-known but heretofore neglected concepts. For example, the plan for harnessing the huge heat reserves of the oceans has been known for many years but it needs a concentrated effort to bring it to the point of practical application. NASA could be a vital link in transforming promising concepts into ready-to-use energy. The Committee recognized this potential last year when it requested and received a report detailing NASA's ability to help solve critical national needs. There is no more critical national need than solving our energy crisis and NASA should move to meet the problem head-on.

STRATOSPHERIC RESEARCH

The Committee is concerned about the recent statements relating to upper atmosphere ozone depletion, allegedly resulting from freon gas discharges from aerosol cans, refrigerators and air conditioners, and a problem purportedly to be compounded by supersonic transport aircraft emissions. We note with favor that NASA has underway various studies and experiments addressing this issue as evidenced in testimony before the Committee at the NASA field centers. A significant amount of research funds have to be allocated to this effort.

The Committee urges NASA to devote as much effort as possible to a definitive analysis of this issue and to report their findings to the Committee at the earliest possible time.

LARGE SPACE TELESCOPE

The Committee notes that there is broad scientific support for a Large Space Telescope (LST). First recommended in a National Academy of Science report in 1962 and currently recommended as a new start by the Space Science Board, the LST will accelerate our scientific understanding of the content, structure, scale, and evolution of the universe. The LST, now being studied as a 10-15 year life Space Shuttle launched and serviced observatory, will have the ability to see 6 to 10 times further into space and with about 10 times better resolution than our best ground-based optical observatories.

The Committee notes with approval that, since the budget hearings of last year NASA has been investigating lower cost options, international participation, and a later launch schedule. Testimony before the Committee by NASA indicated that cost savings are possible by going to a slightly smaller telescope than initially envisioned. Also the smaller telescope has less technical risk in development and hence a cost estimate with greater confidence. The smaller telescope still meets the requirements of the scientific community. NASA also reported on discussions of participation in the LST program with the United Kingdom and the European Space Research Organization.

The LST is one of the more important programs likely to be requested by the NASA Office of Space Science in the remainder of this decade. It is essential that costs be minimized to ensure that a vigorous balanced space science program can be maintained.

EDUCATIONAL, MEDICAL AND COMMUNICATION SERVICES

The Committee wishes to emphasize the importance it places on the Advanced Technology Satellite Program. The ATS-6 has been an unqualified success. The data from this valuable spacecraft has already proven its worth in several areas of daily life such as education, medical and communications services. Because of its coverage, the quality of its data and the many uses to which it can be applied, ATS-6 has quickly come to be considered an outstanding tool. This program has been widely acclaimed by experts and laymen alike, for its potential and actual contributions to the betterment of our quality of life.

The Committee notes with concern that the backup Advanced Technology Satellite (ATS-G) is being placed in bonded storage by NASA and the successful NASA/Industry team disbanded. The concern arises from the fact that NASA has no plans for:—

A. Exploring the possibility of financial support from the potential user community for ATS-G,

B. Exploring with the aerospace industry the possibility of purchasing the ATS-G as a commercial venture, and

C. Examining the effort now underway between the Indonesian Government and a United States aerospace firm providing a similar service satellite for that country to determine the most expeditious way in which a similar venture can be provided for the United States following the successful use of the Advanced Technology Satellite.

Therefore, the Committee requests that the administrator of NASA take the initiative to examine the above concerns and report his findings to the Committee on Science and Technology not later than October, 1975.

SHORT-TERM WEATHER PHENOMENA

The Committee wishes to reemphasize the importance it attaches to NASA's research related to short-term weather phenomena. The outgrowth of this concern was the Congress earmarking \$2 million in Public Law 93-136 for meteorological research directed to reducing the annual number of weather disasters, the amount of property damage, and most important, the number of lives lost.

NASA has the unique ability to apply advanced techniques and technology to a problem which is largely defying more conventional approaches. The NASA research and development effort envisioned by the Committee would entail development of sophisticated techniques for observing and forecasting severe local storms, particularly thunderstorms, tornadoes, and hurricanes relying on both satellite and aircraft-borne sensing devices. The program would be aimed at expanding the current state of knowledge in order to develop the necessary systems to detect, monitor, modify, and forecast severe storms

EARTH RESOURCES SURVEY

The Committee commends NASA for providing a third Earth Resources Technology Satellite now called LANDSAT-C, that will provide continuity of remote sensing data from space through the remainder of this decade.

The reprogramming of Fiscal Year 1975 funds and subsequent authorization will allow LANDSAT-C to include an improved multi-spectral scanner containing a thermal channel and also an improved Return Beam Vidicon Camera System. These features provide a thermal mapping capability and an improvement in image resolution substantially better than the capability of the predecessor to LANDSAT-C.

However, the Committee notes the increasing demands for data reduction, analysis and interpretation necessary to realize the full potential of LANDSAT and the Committee urges NASA to expand and reinforce its effort to assure that the goal of maximum user service is met.

EARTH RESOURCES REVIEW

The Committee recommends that the Administrator of NASA continue to provide for an independent review of the remote sensing technology development program such as carried out by the Committee on Remote Sensing Programs for Earth Resource Surveys, Commission on Natural Resources, National Academy of Sciences. Included in these reviews should be an analysis of the processing and information management techniques and an assessment of the program as related to the needs of those working in the earth resources and environmental fields. Further, these reviews should identify where possible technological opportunities that may lead to improved remote sensing capabilities.

TECHNOLOGY UTILIZATION

The Committee notes with approval the fact that NASA has seen fit to increase the Technology Utilization Budget in order to better perform the vital function of disseminating technical information to the public and private sector.

The Committee was impressed with the plans of the Technology Utilization Office as described during the fiscal year 1976 authorization hearings for a broader dissemination base by expanding the basic seven NASA industrial application information centers to include additional field centers.

The Committee encourages these initiatives by NASA and looks forward to corresponding increases in the application of space technology to the everyday benefit of the public.

AERONAUTICAL RESEARCH AND DEVELOPMENT

The Committee believes that aeronautical research and development programs have not been given sufficiently high priority in NASA plans and budget requests. This view is amply supported by the statistics shown in Tables I and II.

In Table I is shown the total NASA appropriation each year since it was established in 1959 by combining the National Advisory Committee for Aeronautics and several Department of Defense activities related to space. The Table shows that in a total of \$59,967,200,000 allocated to NASA since 1959, an amount of \$2,858,900,000 has been devoted to aeronautical R&D— or 4.7 percent.

For facilities, Table II shows that in a total program of major discrete projects of \$2,919,400,000 since 1959; the amount of \$91,015,000 has been devoted to aeronautical R&D facilities—or 3.1 percent. It is also noted that, with several exceptions, the major basic aeronautical facilities were constructed in the 1940's. Most of the money spent since 1959 on the aeronautical facilities has been for upgrading modifications.

An important consideration in analyzing these data is the fact that military developments, once heavy contributors to new aeronautical technology, are fewer in number and are projected to produce less civil oriented research and technology. Industry believes that the time is coming when civil research and development will be a more significant factor in military development. This amounts to a role reversal from the 1940's and 1950's.

Safe, rapid, economical travel by air has become a part of our national life. As air transportation has grown so have related problems: environmental, economic and technological. All of the industrialized nations and many emerging nations have as a matter of national policy allocated governmental resources to the development of various segments of the aviation manufacturing industry.

These national policies stem from a determination to obtain a larger share of the world market. Based on an effective partnership of private industry and the Government, the U.S. has been able to dominate the world aviation market; indeed, as the following data show, exports are substantial in relation to imports.

Year	Exports	Imports
1972	\$2,919,408,134	\$414,925,292
1973	4,124,048,349	554,498,398
1974	5,766,415,674	510,159,162

Along with agricultural products, aircraft and related items remain as one of the few areas which contribute favorably to our international trade balance. Therefore, in view of the importance of aeronautical research and development to the retention of U.S. leadership in the international market place, to the health of two major industries— aircraft manufacturing and air transportation, and to the public's welfare in solving severe environmental problems (for example, noise and emission), the Committee is concerned about the "no-growth" character of the Fiscal Year 1976 Budget Request. NASA is strongly urged to resume and continue a modest growth rate in aeronautical research and development programs and facilities.

TABLE I.—NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
BUDGET HISTORY

SUMMARY ALL APPROPRIATIONS

Fiscal year	Total NASA appropriation	Aeronautical R. & D. program	Aeronautical R. & D. percent of appropriation
1959 DOD transfer.....	\$146,600,000		
1959.....	184,300,000	\$70,000,000	30.0
1960.....	523,600,000	62,200,000	11.8
1961.....	964,000,000	37,900,000	3.8
1961 DOD transfer.....	2,700,000		
1962.....	1,825,300,000	28,100,000	1.5
1963.....	3,674,100,000	47,000,000	1.3
1964.....	5,100,000,000	83,300,000	1.6
1965.....	5,250,000,000	102,300,000	1.9
1966.....	5,175,000,000	110,400,000	2.1
1967.....	4,968,000,000	135,300,000	2.7
1968.....	4,588,900,000	157,300,000	3.4
1969.....	3,995,300,000	168,100,000	4.2
1970.....	3,749,200,000	186,300,000	4.9
1971.....	3,312,600,000	212,100,000	6.4
1972.....	3,310,100,000	235,400,000	7.1
1973.....	3,407,600,000	297,200,000	8.7
1974.....	3,039,700,000	303,300,000	9.9
1975.....	3,211,200,000	308,800,000	9.6
1976.....	3,539,000,000	314,200,000	8.8
Total.....	59,967,200,000	2,858,900,000	4.7

NOTES

Fiscal year 1959 data includes amounts appropriated for the National Advisory Committee for Aeronautics (NACA).

Appropriation column shows actual amounts appropriated and excludes transfers, except DOD transfers which are identified.

Amounts for supplementals are included where applicable. (Appropriated amounts in fiscal year 1960 and fiscal year 1965 include supplementals against the previous year's authorization.)

The amounts shown for fiscal year 1976 are the NASA budget requests.

TABLE II.—AERONAUTICAL R. & D. FACILITIES PERCENTAGE
ANALYSIS

Fiscal year	Total program major discrete projects including aeronautical	Total included aeronautical projects (only)	Percent of total program aeronautical
1959.....	\$47,700,000	\$1,400,000	2.9
1960.....	98,300,000	5,637,000	5.6
1961.....	124,900,000	0	0
1962.....	345,700,000	0	0
1963.....	752,500,000	1,807,000	.2
1964.....	728,600,000	6,665,000	.1
1965.....	238,600,000	4,878,000	2.1
1966.....	45,200,000	1,120,000	2.5
1967.....	84,700,000	21,745,000	25.7
1968.....	33,100,000	2,040,000	6.2
1969.....	30,600,000	0	0
1970.....	38,700,000	6,048,000	15.6
1971.....	15,700,000	2,590,000	16.5
1972.....	42,900,000	7,360,000	17.1
1973.....	57,400,000	12,935,000	22.5
1974.....	68,100,000	2,410,000	3.6
1975.....	112,400,000	9,745,000	8.7
1976.....	54,300,000	4,635,000	8.5
Total.....	2,919,400,000	91,015,000	3.1

It should be noted that the Committee has since the mid-1960's been urging NASA to give more attention to aeronautical R&D. Table I shows some growth did take place starting about 1964, but the growth rate appears to have dropped despite persistent recommendations to the contrary by the Committee. In numerous oversight reports important problems have been identified where more work could and should be done.

EXPLANATION OF THE BILL

TRANSITION PERIOD

July 1, 1976 to September 30, 1976

RESEARCH AND DEVELOPMENT

SUMMARY

Programs:	Authorization
1. Space shuttle.....	\$321,000,000
2. Space flight operations.....	55,100,000
3. Advanced missions.....	500,000
4. Physics and astronomy.....	46,600,000
5. Lunar and planetary exploration.....	73,300,000
6. Launch vehicle procurement.....	40,400,000
7. Space applications.....	54,700,000
8. Aeronautical research and technology.....	40,800,000
9. Space and nuclear research and technology.....	22,355,655
10. Energy technology applications.....	1,500,000
11. Tracking and data acquisition.....	66,400,000
12. Technology utilization.....	2,000,000
Total	730,600,000
Less	30,000,000
	700,600,000

RESEARCH AND DEVELOPMENT, \$700,600,000

Funds for research and development for the three month transition period provides for continued effort described in the corresponding section of this report for Fiscal Year 1976. No new programs are provided for in the transition period funding. A general reduction of \$30,000,000 was taken in the total research and development request for the Transition Period (excluding Aeronautical research and technology) providing NASA management with flexibility in making selected reductions to conform to the requirements of the Bill.

CONSTRUCTION OF FACILITIES

SUMMARY

An additional amount of \$8,050,000 is included to continue Rehabilitation and Modifications, Minor Construction and Facility Planning and Design during the transition period from July 1, 1976 through September 30, 1976, as follows:

Projects:	Authorization
1. Rehabilitation and modification of facilities at various locations, not in excess of \$500,000 per project.....	\$4,000,000
2. Minor construction of new facilities and additions to existing facilities at various locations, not in excess of \$250,000 per project.....	1,250,000
3. Facility planning and design not otherwise provided for.....	2,800,000
Total	8,050,000

RESEARCH AND PROGRAM MANAGEMENT

SUMMARY

For the transition period, July 1, 1976 to September 1976, the authorization for Research and Program Management totals \$213,800,000. The program for this period is a continuation of the FY 1976 level of effort and is 27.6 percent of the total included for that fiscal year. A recapitulation of the distribution of the proposed authorization and the civil service work force is as follows:

Installation	Authorization requested (millions)	Personnel (permanent positions)
Johnson Space Center.....	\$35.0	3,613
Kennedy Space Center.....	30.0	2,259
Marshall Space Flight Center.....	34.4	4,113
National Space Technology Laboratories.....	.4	70
Goddard Space Flight Center.....	27.7	3,754
Wallops Flight Center.....	3.5	415
Ames Research Center.....	12.7	1,676
Flight Research Center.....	4.9	489
Langley Research Center.....	23.3	3,332
Lewis Research Center.....	21.9	3,025
Headquarters.....	20.0	1,570
Total.....	213.8	24,316

SECTIONAL ANALYSIS

[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]

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 \$3,585,873,000, as follows: (a) for "Research and development," a total of 12 program line items aggregating the sum of \$2,684,180,000; (b) for "Construction of facilities," a total of 8 line items aggregating the sum of \$125,693,000; and (c) for "Research and program management," \$776,000,000. Subsection (c) would also authorize to be appropriated such additional or supplemental amounts as may be necessary for increases in salary, pay, retirement, or other employee benefits authorized by law.

Subsection 1(d) would authorize the use of appropriations for "Research and development" without regard to the provisions of subsection 1(g) for: (1) items of a capital nature (other than the acquisition of land) required at locations other than NASA installations 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 or organization. Moreover, each such grant shall be made under such conditions as the Administrator shall find necessary to insure that the United States will receive benefit therefrom adequate to justify the making of that grant.

In either case no funds may be used for the construction of a facility in accordance with the subsection 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. 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.

Subsection 1(f) would authorize the use of not to exceed \$35,000 of the "Research and program management" appropriation 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 of the funds appropriated for "Research and development" and "Research and program management," not in excess of \$25,000 per project (including collateral equipment) may be used for construction of new, or additions to existing, facilities, and not in excess of \$50,000 per project (including collateral equipment) may be used for rehabilitation or modification of existing facilities; however, of the funds appropriated for "Research and development," not in excess of \$250,000 per project (including collateral equipment) may be used for construction of new facilities or additions to, or rehabilitation or modification of, existing facilities required for unforeseen programmatic needs.

Section 2.—Section 2 would authorize upward variations of the sums authorized for the "Construction of facilities" line items (other than facility planning and design) of 10 per centum in the discretion of the Administrator or his designee, or 25 per centum following a report by the Administrator or his designee to the Committee on Science and Technology of the House of Representatives and the Committee on Aeronautical and Space Sciences of the Senate on the circumstances of such action, for the purpose of meeting 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 (1) 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 Technology 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

Section 6 would authorize the National Aeronautics and Space Administration, when so provided in an appropriation Act, to enter into a contract (or contracts) for tracking and data relay satellite services. The Government would incur no costs under such contract prior to the furnishing of such services except that the contract could provide for the payment for contingent liability of the Government which may accrue in the event the Government should decide for its convenience to terminate the contract before the expiration of the contract period. Such tracking and data relay satellite services would be furnished to the Administration in accordance with applicable authorization and appropriation Acts. It is envisaged that facilities may be required to be provided under such a contract in order to provide such services. The bill would authorize the construction of such facilities on Government-owned land if there is included in the contract a provision under which the United States may, in accordance with terms and conditions agreed upon in the contract, acquire title to the facilities upon contract termination. In

January of each year the Administrator would be required to report to the Committee on Science and Technology and the Committee on Appropriations of the House of Representatives and the Committee on Aeronautical and Space Sciences and the Committee on Appropriations of the Senate the projected aggregate contingent liability, through the next fiscal year, of the Government under termination provisions of any contract authorized under this section. It is specified that the authority of the National Aeronautics and Space Administration to enter into and maintain the contract (or contracts) authorized in this section shall remain in effect as long as provision therefor is included in acts authorizing appropriations to the National Aeronautics and Space Administration for subsequent fiscal years.

Section 7

In addition to amounts authorized under section 1, section 7 would authorize to be appropriated to the National Aeronautics and Space Administration funds in the total amount of \$922,450,000 as follows:

(a) For "Research and Development," \$700,600,000; (b) for "Construction of facilities," \$8,050,000; and (c) for "Research and Program management," \$213,800,000. (Such amounts would become available no earlier than July 1, 1976.) Subsection (c) would also authorize to be appropriated such additional or supplemental amounts as may be necessary for increases in salary, pay, retirement, or other employee benefits authorized by law.

All of the limitations and other provisions of this Act which are applicable to amounts appropriated pursuant to subsections (a), (b), and (c) of section 1 of this Act shall apply in the same manner to amounts appropriated pursuant to subsections (a), (b), and (c), respectively, of this section.

Section 8

Section 8 would authorize the Administrator of the National Aeronautics and Space Administration to prescribe such regulations as he may deem necessary to permit the release with restriction for a limited period of time or prohibit disclosure of any technical information obtained or developed by the Agency in its conduct of research and development activity, if such technical information (A) contains ideas, concepts, or designs which have been submitted in confidence to the Administrator by any person, firm, or institution; or, (B) results from a program of the Administrator and the Administrator determines that disclosure or unrestricted release of such information to foreign competitors of the United States may be detrimental to the preservation of the role of the United States as a leader in aeronautical and space science and technology and the application thereof. The section further provides that none of the foregoing will and nothing in the section shall be construed to authorize the withholding of information from duly authorized committees of Congress or to restrict or modify any authority presently existing in any other agency or department of the Government of the United States to exchange information or otherwise to authorize or license the export of information.

Section 9

Section 9 would provide that the Act may be cited as the "National Aeronautics and Space Administration Authorization Act, 1976".

COST AND BUDGET DATA

The bill will authorize appropriations for Fiscal Year 1976 in the amount of \$3,585,873,000 and for the transition period in the amount of \$922,450,000.

In accordance with Rule XI, Clause 2(1)(4) of the Rules of the Legislative Reorganization Act of 1970, the Committee's estimate for the next five years of the NASA budget request is as follows:

Fiscal year:	Millions
1976 -----	\$3, 586
Transition period -----	922
1977 -----	3, 575
1978 -----	3, 297
1979 -----	2, 824
1980 -----	2, 337

These estimates do not include provisions for any new program or program augmentations that may be recommended, nor do they include any provisions for administrative adjustments that may be required.

EFFECT OF LEGISLATION ON INFLATION

In accordance with Rule XI, Clause 2(1)(4) of the Rules of the House of Representatives this legislation is assessed to have no adverse inflationary effect on prices and costs in the operation of the national economy. NASA expenditures are labor intensive with approximately 55 percent of spending directly for jobs and the remainder for materials. There is now underemployment and unused plant capacity in the aerospace industry, therefore, these expenditures will not be inflationary.

The long run economic effect of NASA expenditures is to increase productivity, both through direct application of aeronautical and space technology (as demonstrated by communications satellites, improved aircraft and other innovations) and indirectly through the development and dissemination of advanced technology which is then applied in many other sectors of the economy.

Independent studies by the Midwest Research Institute and by Chase Econometrics, Inc. have shown the average rate of return for NASA high technology expenditures to be in the range of 32 to 36 percent per year or a return of \$7 on every \$1 of NASA expenditure over a period of years.

COMMITTEE RECOMMENDATION

A quorum being present, the Committee unanimously approved the bill by voice vote of those present.

NASA RECOMMENDATION

This is a National Aeronautics and Space Administration legislation item approved with the exceptions noted in this report by the Office of Management and Budget, as indicated by the following letter:

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION,
Washington, D.C., February 4, 1974.

HON. CARL ALBERT,
Speaker of the House of Representatives,
Washington, D.C.

DEAR MR. SPEAKER: Submitted herewith 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 the House.

Section 4 of the Act of June 15, 1959, 73 Stat. 73 (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 a 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 fiscal year 1976. For that fiscal year, the bill would authorize appropriations totaling \$3,539,000,000 to be made to the National Aeronautics and Space Administration as follows:

- (1) for "Research and development" amounts totaling \$2,678,380,000;
- (2) for "Construction of facilities" amounts totaling \$84,620,000; and
- (3) for "Research and program management," \$776,000,000.

In addition, the bill would authorize appropriations totaling \$958,900,000, to be available July 1, 1976, the beginning of the three-month transition period between fiscal year 1976 and fiscal year 1977, the latter of which will begin October 1, 1976, under the provisions of the Congressional Budget Act of 1974, 88 Stat. 297. The bill would also authorize appropriations totaling \$3,625,000,000, to be available October 1, 1976, i.e., in fiscal year 1977.

The enclosed draft bill follows generally the format of the National Aeronautics and Space Administration Authorization Act, 1975

(Public Law 93-316). However, the bill differs in substance from the prior Act in several respects. First, subsections 1(a), 1(b), and 1(c), which would provide the authorization to appropriate for the three NASA appropriations, differ in the dollar amounts and the line items for which authorization to appropriate is requested.

Second, as authorized in subsection 1(g) of the prior Act, funds appropriated pursuant to subsections 1(a) and 1(c) may be used for facility projects involving minor construction and additions to existing facilities as well as facility rehabilitation and modification projects, with a per project limit of \$10,000 and \$25,000, respectively. In recognition of the increases in construction costs which have been experienced since these limits were initially established, the bill increases these amounts to \$25,000 and \$50,000, respectively, to maintain the operating flexibility that was originally intended.

Third, section 2 of the bill has been modified. In addition to authorizing an upward variation of 10 per centum in the amounts prescribed in the "Construction of facilities" line items, in the discretion of the Administrator or his designee, to meet unusual cost variations, section 2 would also authorize an upward variation of 25 per centum in such line items to meet such cost variations, but under this added authority the upward variations could not exceed 10 per centum unless NASA submits a report to the Committee on Science and Technology of the House of Representatives and the Committee on Aeronautical and Space Sciences of the Senate on the circumstances of such action. This authority has been necessitated by widening fluctuations in the costs of construction projects.

Fourth, section 6 of the prior Act, which amended the National Aeronautics and Space Act of 1958 and is, therefore, permanent law, has been omitted.

Fifth, section 6 of the bill would authorize NASA, when so provided in an appropriation Act, to enter into a contract for tracking and data relay satellite services. Such services will greatly improve our earth-orbital tracking and data acquisition capabilities and, at the same time, permit closing of most of the ground stations in our present worldwide tracking and data acquisition network now dedicated to spacecraft in near-earth orbit. Section 6 was enacted in a slightly modified form as section 7 of the National Aeronautics and Space Administration Authorization Act, 1975.

Sixth, as noted above, in addition to providing authorization of appropriations in the amounts recommended by the President in his Budget for fiscal year 1976, the bill also would provide authorization for appropriations to be available in the three-month period between fiscal years 1976 and 1977, and in fiscal year 1977. The additional authorization of appropriations for these fiscal periods would be provided in sections 7 and 8 of the bill. It is specified that all of the limitations and other provisions of the bill applicable to amounts appropriated pursuant to section 1 shall apply also to amounts appropriated pursuant to sections 7 and 8.

Finally, the last section of the draft bill, section 9, has been changed to provide that the bill, upon enactment, may be cited as the "National Aeronautics and Space Administration Authorization Act, 1976", rather than "1975".

Where required by section 102(2)(C) of the National Environmental Policy Act of 1969 (42 U.S.C. 4332(2)(C)), environmental impact statements covering NASA installations and the programs to be funded pursuant to the bill have been furnished to the Committee on Science and Technology.

The National Aeronautics and Space Administration recommends that the enclosed draft bill be enacted. The Office of Management and Budget has advised that such enactment would be in accord with the program of the President.

Sincerely,

JAMES C. FLETCHER, *Administrator*.

94th Congress }
1st Session }

SENATE

REPORT
No. 94-193

NASA AUTHORIZATION FOR
FISCAL YEAR 1976 AND FOR TRANSITION
PERIOD JULY 1, 1976—SEPTEMBER 30, 1976

REPORT

OF THE

COMMITTEE ON
AERONAUTICAL AND SPACE SCIENCES
UNITED STATES SENATE

ON

H.R. 4700

AN ACT TO AUTHORIZE APPROPRIATIONS TO THE
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
FOR RESEARCH AND DEVELOPMENT, CONSTRUCTION OF
FACILITIES, AND RESEARCH AND PROGRAM MANAGE-
MENT, AND FOR OTHER PURPOSES



May 5 (legislative day, April 21), 1975.—Ordered to be printed

U.S. GOVERNMENT PRINTING OFFICE
WASHINGTON : 1975

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Calendar No. 98

114TH CONGRESS }
1st Session }

SENATE

REPORT
No. 94-103

AUTHORIZING APPROPRIATIONS TO THE NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

May 5 legislative day, April 21, 1975.—Ordered to be printed

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

REPORT

[To accompany H.R. 4700]

The Committee on Aeronautical and Space Sciences, to which was referred the bill (H.R. 4700) 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.

CONGRESSIONAL ADJUSTMENTS TO NASA REQUEST FOR FISCAL YEAR 1976 AND FOR TRANSITION PERIOD JULY 1, 1976—SEPT. 30, 1976—SUMMARY

Fiscal year 1976	Budget request	House action	Senate committee action
Research and development			
Space Shuttle	\$1,206,000,000	\$1,206,000,000	\$1,206,000,000
Space flight operations	207,100,000	203,100,000	203,100,000
Advanced missions	1,500,000	3,000,000	-
Physics and astronomy	155,800,000	156,800,000	152,800,000
Lunar and planetary exploration	259,900,000	258,900,000	259,900,000
Launch vehicle procurement	268,900,000	100,000,000	166,000,000
Space applications	175,030,000	181,530,000	183,930,000
Aeronautical research and technology	175,350,000	175,350,000	175,350,000
Space and nuclear research and technology	74,900,000	76,900,000	74,900,000
Energy technology applications	5,900,000	5,900,000	5,900,000
Tracking and data acquisition	243,000,000	240,800,000	240,800,000
Technology utilization	7,000,000	9,000,000	7,000,000
Total	2,678,380,000	2,684,180,000	2,686,580,000
Construction of facilities	84,620,000	125,693,000	82,130,000
Research and program management	776,000,000	776,000,000	776,000,000
Grand total	3,539,000,000	3,585,873,000	3,544,710,000
Transition period			
Research and development			
Space Shuttle	321,000,000	-	-
Space flight operations	55,100,000	-	-
Advanced missions	500,000	-	-
Physics and astronomy	45,600,000	-	-
Lunar and planetary exploration	73,300,000	-	-
Launch vehicle procurement	40,400,000	-	-
Space applications	54,700,000	-	-
Aeronautical research and technology	46,800,000	-	-
Space and nuclear research and technology	22,300,000	-	-
Energy technology applications	1,500,000	-	-
Tracking and data acquisition	66,400,000	-	-
Technology utilization	2,000,000	-	-
Total	730,600,000	1,700,600,000	1,704,600,000
Construction of facilities	14,500,000	8,350,000	11,500,000
Research and program management	213,800,000	213,800,000	213,800,000
Grand total	958,900,000	922,750,000	929,900,000

\$30 million reduction not allocated.
\$26 million reduction not allocated.

PURPOSE OF THE BILL

The purpose of this bill is to authorize appropriations to the National Aeronautics and Space Administration totaling \$3,544,710,000 for fiscal year 1976 and \$929,900,000 for the Transition Period July 1, 1976-September 30, 1976, as follows:

Fiscal year 1976	Budget request	House action	Senate committee action
Research and development			
Research and development	\$1,206,000,000	\$1,206,000,000	\$1,206,000,000
Construction of facilities	84,620,000	125,693,000	82,130,000
Research and program management	776,000,000	776,000,000	776,000,000
Transition period			
Research and development			
Research and development	730,600,000	700,500,000	704,600,000
Construction of facilities	14,500,000	8,350,000	11,500,000
Research and program management	213,800,000	213,800,000	213,800,000

LEGISLATIVE HISTORY

The budget request for fiscal year 1976 and for the Transition Period, July 1, 1976-September 30, 1976, for the National Aeronautics and Space Administration was introduced in the House under H.R. 2931, and in the Senate as S. 573. After holding hearings, the House Committee on Science and Technology reported out a clean bill, H.R. 4700, which was passed by the House, with one floor amendment, and subsequently referred to this Committee.

The Committee held hearings on S. 573 during February and March 1975. During its consideration of the bill, the Committee determined amendments were required.

The Committee has reported out H.R. 4700 with an amendment striking all after the enacting clause and inserting the Committee amendment.

SUMMARY

The budget estimates for the National Aeronautics and Space Administration are, for FY 1976, \$3,539,000,000, for the transition quarter, \$958,900,000, and for FY 1977, \$3,625,000,000.

At the request of the Administration, S. 573 was introduced on February 5, 1975, to provide program authorization in these amounts and additional legislative authority requested for NASA.

In its actions on the authorization request, the Committee recommends increases totaling \$15,900,000 and decreases totaling \$39,190,000, for a net decrease of \$23,290,000 below the budget estimates for FY 1976 and the transition quarter.

Most significant among the Committee actions are:

1. Removal from the bill of provisions authorizing a total of \$3,625,000,000 for FY 1977. The FY 1977 authorization will be handled under normal procedures at a later date;
2. Addition of \$11 million to the requested amount for NASA research, development, and monitoring activities designed to further the understanding of the physics and chemistry of the upper atmosphere in general and the possible inadvertent modification of the stratosphere in particular;
3. Incorporation in the bill of a legislative direction to NASA to undertake a program of research, development, and monitoring of the upper atmosphere and to coordinate its activities with other appropriate agencies of the Federal Government, with industry and the academic community, and with other governments;
4. Specific reductions in the amounts requested for Space Flight Operations, Advanced Missions, Tracking and Data Acquisition, and a Lunar Curatorial Facility, and specific additions in numerous Space Applications projects including earth resources, communications and weather satellites;
5. Approval of the FY 1976 program estimates for Space Shuttle, Lunar and Planetary Exploration, Launch Vehicle Procurement, Aeronautical Research and Technology, Space and Nuclear Research and Technology, Energy Technology Applications, Technology Utilization, and Research and Program Management.

As reported by the Committee, the bill authorizes a NASA program for FY 1976 with these key features:

- no new starts, for the first time in the history of the agency
- total cost requirements equal to less than 1% of the Federal budget
- an overall program plan more than \$600 million below the "constant level" budget approved by the Congress in 1972
- agency purchasing power less than one-third the level of the peak NASA expenditures in the mid-1960's
- reduction of the NASA in-house workforce for the ninth consecutive year

Despite these harsh fiscal restraints, the NASA program continues to produce invaluable benefits—both direct and indirect—to the people of the United States and all mankind. In the 1970's, we have moved from the era of the promise of space research to the era of actual and frequently quantifiable benefits.

The program approved by the Committee strikes a balance between continuing work on the most challenging long-term goals and productive efforts to reap the harvest of past investments, meeting the pressing needs of today.

Fiscal Year 1976.—The NASA budget request for FY 1976 was for a total of \$3,539,000,000, of which \$2,675,350,000 was for Research and Development, \$84,620,000 was for Construction of Facilities, and \$776,000,000 was for Research and Program Management. The House approved an authorization total of \$3,555,573,000, of which \$2,684,180,000 was for Research and Development, \$125,893,000 was for Construction of Facilities, and \$776,000,000 was for Research and Program Management.

The Committee is recommending an authorization of \$3,544,710,000, an amount \$5,710,000 above the NASA request and \$41,163,000 below that in the House-approved bill. Of the total amount the Committee recommends \$2,686,550,000 for Research and Development, which is \$2,400,000 above the House-approved amount and \$8,200,000 above the NASA request for this appropriations category. The Committee recommends \$82,130,000 for the Construction of Facilities, which is \$43,563,000 below the House amount and \$2,490,000 below the NASA request. Finally, the Committee recommends \$776,000,000 for Research and Program Management, which is identical with the amount approved by the House and that requested by NASA. The reasoning accompanying the actions of the Committee is contained in this report under the various programs and items herein.

Transition Period.—The NASA budget request for the transition period to the new fiscal year, July 1, 1976, through September 30, 1976, was for a total of \$958,900,000, of which \$730,600,000 was for Research and Development, \$14,500,000 was for the Construction of Facilities, and \$213,800,000 was for Research and Program Management. The House approved an authorization total of \$922,450,000, of which \$700,600,000 was for Research and Development, \$8,050,000 was for the Construction of Facilities, and \$213,800,000 was for Research and Program Management.

The Committee is recommending an authorization of \$929,900,000, an amount \$29,000,000 below the NASA request and \$7,450,000 above the amount in the House-approved bill. Of the total amount the Com-

Committee recommends \$704,600,000 for Research and Development, which is \$1,000,000 above the House-approved amount and \$26,000,000 below the NASA request. The Committee is recommending \$11,500,000 for the Construction of Facilities, which is \$3,450,000 above the House amount and \$3 million below the NASA request. Finally, the Committee recommends \$243,800,000 for Research and Program Management, an amount identical with that approved by the House and requested by NASA. The description of the programs and the activities, together with any Committee comments applicable to the transition period are integrated with those similar items in the FY 1976 presentation.

As noted, the major Committee action on the transition period request was a reduction of \$26,000,000 in Research and Development with a lesser cut of \$3,000,000 in the Construction of Facilities. In view of the short duration of the transition period and recognizing the need for flexibility during this phase-in period, the Committee, in assessing its reduction in Research and Development, cut the total only and permits NASA the flexibility to apply the reduction against the various programs providing the total of any one program as specified in Section 7 of the bill is not exceeded.

RESEARCH AND DEVELOPMENT

Fiscal year: 1976	Budget request	House action	Senate committee action
Research and development:			
Space shuttle.....	\$1,206,000,000	\$1,206,000,000	\$1,206,000,000
Space flight operations.....	207,100,000	203,100,000	203,100,000
Advanced missions.....	1,500,000	3,000,000	0
Physics and astronomy.....	155,800,000	155,800,000	152,800,000
Lunar and planetary exploration.....	259,900,000	258,900,000	259,900,000
Launch vehicle procurement.....	165,900,000	165,900,000	165,900,000
Space applications.....	175,030,000	181,530,000	183,930,000
Aeronautical research and technology.....	175,350,000	175,350,000	175,350,000
Space and nuclear research and technology.....	74,900,000	76,900,000	74,900,000
Energy technology applications.....	5,900,000	5,900,000	5,900,000
Tracking and data acquisition.....	243,000,000	240,800,000	240,800,000
Technology utilization.....	7,000,000	5,000,000	7,000,000
Total.....	2,678,380,000	2,684,180,000	2,686,580,000
Transition period			
Research and development:			
Space shuttle.....	321,000,000		
Space flight operations.....	55,100,000		
Advanced missions.....	500,000		
Physics and astronomy.....	46,600,000		
Lunar and planetary exploration.....	73,300,000		
Launch vehicle procurement.....	40,400,000		
Space applications.....	54,700,000		
Aeronautical research and technology.....	46,800,000		
Space and nuclear research and technology.....	22,300,000		
Energy technology applications.....	1,500,000		
Tracking and data acquisition.....	66,400,000		
Technology utilization.....	2,000,000		
Total.....	730,600,000	700,600,000	704,600,000

\$30 million reduction not allocated.

\$26 million reduction not allocated.

SPACE FLIGHT OPERATIONS PROGRAM

FISCAL YEAR 1976	\$203,100,000
TRANSITION PERIOD	55,100,000

COMMITTEE COMMENT

In anticipation of the completion of the Apollo-Soyuz Test Project early in FY 1976, the Committee expects NASA to use this opportunity to introduce the maximum efficiency and economy while organizing to support the essential on-going activities conducted under this program. In view of this expectation, the Committee agrees with the \$4 million reduction in the NASA request for this program made by the House. The application of the cut to various program elements is left to the discretion of NASA.

ADVANCED MISSIONS PROGRAM

FISCAL YEAR 1976	6
TRANSITION PERIOD	6

OBJECTIVES

The objective of the Advanced Missions program is to examine the future direction of the nation's manned space flight program. New space systems, new operational concepts and advanced uses of existing systems evolve from studies conducted under this program. Emphasis is given to the utilization of existing systems to advance the Nation's space capabilities at a minimum cost.

COMMITTEE COMMENT

The Committee recommends the deletion of this line item, for which \$1.5 million was requested by NASA.

In its report on the FY 1975 authorization bill, the Committee expressed the view that the activities encompassed by this program should be integrated with those similar and related functions in other NASA programs. This view was considered most appropriate with the advent of the shuttle era and the need to consider the shuttle in its proper role—that of a transportation system to support space science and applications activities. The Committee reiterates this view.

Accordingly, the Committee does not agree with the House action increasing this program amount to \$3 million. Overall advanced mission planning should be consolidated and enhanced, and the Committee supports studies of the type proposed by NASA and the House. However, the maintenance of separate funding categories for different types of missions increases the risk of inadequate coordination and inefficient use of available planning resources. The time for arbitrary distinctions between "manned" and "unmanned" space flight has passed.

PHYSICS AND ASTRONOMY PROGRAM

FISCAL YEAR 1976	\$162,800,000
TRANSITION PERIOD	46,600,000

COMMITTEE COMMENT

The Committee is concerned, as is the scientific community and the public, about the possible depletion of the protective ozone layer in the earth's upper atmosphere. Accordingly, the Committee held a hearing on January 29, 1975, to: (1) learn more about the upper atmosphere generally and the stratosphere ozone problems specifically; (2) explore what programmatic activity should be undertaken to understand the stratospheric ozone problem, and (3) identify corrective actions, if any, that should be initiated. These matters were further explored during the hearings on S. 573. The hearings demonstrated that there is much to be learned about the upper atmosphere and the problems of the stratosphere and that gathering and analyzing the data to provide the necessary understanding will be a complex and demanding task. As there are substantial variations in the ozone content of the stratosphere between the equator and the poles, and between the southern and northern hemisphere, it is clear that the task requires worldwide data so that NASA, with its space and related capabilities, is uniquely equipped to carry out a program to enhance our understanding of this important part of the earth's environment.

During the hearings NASA informed the Committee that it can identify about \$7 million in its FY 1975 budget plan that relate to researching the suspected stratospheric ozone problem. No increase is proposed in the NASA level of effort for FY 1976; moreover, the total federal R&D funding in this area is actually decreasing. Yet this is clearly an important problem, as it involves a possible threat to life on earth.

The urgency to enhance the state of our knowledge on this problem demands that this activity be pursued vigorously by a lead agency. Accordingly, the Committee, in Section 8 of the bill, provides legislative authority which authorizes and directs the National Aeronautics and Space Administration to undertake a program of research, technology and monitoring of the earth's upper atmosphere.

The language of the amendment requires that NASA proceed in such manner that full coordination is maintained with other federal agencies involved in this activity, including those agencies which, unlike NASA, have regulatory responsibility, that the expertise of the academic community and industry in upper atmospheric research and technology is integrated into the planning for and carrying out of the program, that every effort be made to obtain international cooperation in this important research, technology and monitoring effort, and that all results of the program be made immediately available to the appropriate regulatory agencies and given the widest practicable public dissemination. Finally, the amendment requires that NASA submit to the President annually for transmittal to the Congress a report on the activities being carried out pursuant to the amendment, together with a description of the accomplishments achieved.

It is the intent of the Committee that the program authorized and directed to be carried out by the amendment have the long-term objective of clearly understanding the earth's upper atmosphere with near-term objectives centered on the problems of the stratosphere. Moreover, it is the intent of the Committee that this effort be effectively consolidated and organized within NASA and that it be properly coordinated with the NASA planetary atmospheric research activity.

For this new research, technology and monitoring activity on the upper atmosphere the Committee recommends adding \$7 million to the Physics and Astronomy Program. This recommendation is \$6 million above the amount approved by the House. For the transition period between FY 1976 and FY 1977 the Committee recommends that an additional \$4 million be allocated to this activity.

LUNAR AND PLANETARY EXPLORATION PROGRAM

FISCAL YEAR 1976	\$259,900,000
TRANSITION PERIOD	73,300,000

COMMITTEE COMMENT

The Committee recommends acceptance of the Lunar and Planetary program request as presented, and accordingly, it does not concur with the House cut of \$1 million in this program.

SPACE APPLICATIONS PROGRAM

FISCAL YEAR 1976	\$183,930,000
TRANSITION PERIOD	54,700,000

COMMITTEE COMMENT

The Committee recommends the addition of \$8.9 million to this program as follows:

Weather and Climate.—The Committee concurs with the House in adding \$1 million to the severe storm observation satellite project.

Earth Resources Survey.—The Committee notes with satisfaction that the Landsat-C follow-on earth resources satellite is now in the program with the launch projected for 1977. This should provide continuity of data for users through 1979 or 1980, depending on satellite lifetime, thereby supporting an increasing number of experiments and allowing a sufficient opportunity to fully exploit and evaluate the potential of this space system.

The Committee supports the "pilot plant" approach to applications systems verification testing, as represented by the LACIE experiment, and encourages the initiation of more of this type of activity. Accordingly, the Committee recommends the addition of \$1.5 million to this program, which is identical to action taken by the House.

While the Landsat-C will provide on going earth resources coverage with an improved (5th or thermal band added) multispectral scanner and an enhanced vidicon system, the launch schedule does not allow introduction of additional instrument capability. The Committee believes it is most important to initiate promptly the development of advanced systems for greater payoffs from satellite surveys. Therefore, it has added \$3.4 million to support full scale development of the thematic mapper, an advanced scanning instrument. This amount is \$2.4 million above that added by the House for the same purpose.

Communications.—The House added \$2 million to the NASA communications request for FY 1976, \$1 million to provide satellite services to support additional users for the ATS and the CAS-C satellites, and \$1 million for research on higher frequencies for communications satellites. The Committee agrees with these additions to the funding for this program.

Shuttle Payloads.—The Committee believes it is timely to proceed with those activities necessary for transition to the space shuttle system in order to maximize the advantages offered by that system. Accordingly, the Committee concurs with the House addition of \$1 million to this activity.

The Committee further recommends that the Administrator of NASA continue to provide for an independent review of the remote sensing technology development program such as carried out by the Committee on Remote Sensing Programs for Earth Resource Surveys, Commission on Natural Resources, National Academy of Sciences. Included in these reviews should be an analysis of the processing and information management techniques and an assessment of the program as related to the needs of those working in the earth resources and environmental fields. Further, these reviews should identify where possible technological opportunities that may lead to improved remote sensing capabilities.

SPACE AND NUCLEAR RESEARCH AND TECHNOLOGY PROGRAM

FISCAL YEAR 1976	\$74,900,000
TRANSITION PERIOD	22,300,000

COMMITTEE COMMENT

The Committee believes that the amount requested for this program, \$74,900,000, an increase of about \$3.5 million over the FY 1975 budget plan, is adequate for these activities. The Committee further believes that there is sufficient flexibility provided to NASA to accommodate those areas identified by the House as needing additional effort, and accordingly, it does not concur with the House addition of \$2 million to this program.

TRACKING AND DATA ACQUISITION PROGRAM

FISCAL YEAR 1976	\$240,500,000
TRANSITION PERIOD	66,400,000

COMMITTEE COMMENT

The Committee recognizes the support nature of the tracking and data acquisition program, and that quick response and overall flawless program performance is essential to the conduct of successful space and aeronautical flight missions. Nevertheless, the Committee notes that this function is experiencing a reduction in manned space flight demands and will be approaching the transition period to the TDRSS system. The Committee also notes that deferrals ordered by the President result in limiting FY 1975 funding to \$238 million. Accordingly, the Committee believes that NASA should seek economies in the program, and therefore, it agrees with the overall reduction of \$2.2 million made in the request for this program by the House in its action on this bill.

TDRSS.—Section 6 of the bill would authorize NASA, when so provided in an appropriation act, to enter into a contract to lease tracking and data relay satellite services. The government would incur no costs under the contract prior to the time that such services were furnished except that the contract could provide for payment of contingent liability by the government which could accrue in the event the government decided for its convenience to terminate the contract before the end of the contract period.

The proposed Tracking and Data Relay Satellite System (TDRSS) is described above. By greatly increasing the percentage of time during which data can be received from and commands sent to most of NASA's earth orbiting satellites a TDRSS would enhance the productivity of such satellites. It also would substantially reduce space program operating costs since the TDRSS would permit closing many of the ground stations of the Space Flight Tracking and Data Network. Accordingly, the Committee has supported the concept, development and deployment of a TDRSS.

TECHNOLOGY UTILIZATION PROGRAM

FISCAL YEAR 1976	\$7,000,000
TRANSITION PERIOD	2,000,000

COMMITTEE COMMENT

The Committee concurs with the NASA request of \$7 million for this program, an increase of \$1.5 million, or 27 percent, above FY 1975, in order to expand the mechanisms and the facilities for transferring technology developed in NASA programs to the public sector. The Committee believes, however, that such a large expansion in one year must be carefully initiated and controlled to assure success and avoid the pitfalls of too rapid growth. Accordingly, the Committee does not agree with the House action which added another \$2 million to the already planned program expansion, resulting in a proposed 63 percent increase in one year.

In the expansion of the network of Industrial Applications Centers through the establishment of IAC Divisional offices, NASA should assure that the selected locations are in areas not now geographically or otherwise realistically accessible to an existing NASA facility, in order to maximize the total area served throughout the nation.

More specifically, in view of the numerous industrial areas of the nation that are relatively remote from any NASA Center or technology utilization dissemination center, no IAC facility should be located in an area coincident with the reasonable geographic service capability of an established NASA Center.

TRANSITION PERIOD

COMMITTEE COMMENT

The Committee noted that the amounts requested for each Research and Development program for the transition period to the next fiscal year, July 1, 1976 through September 30, 1976, exceeded the quarterly equivalent requested for that program for FY 1976. While the Committee appreciates that the transition period is a one-time occurrence and that fund availability for contract renewals and other requirements may ordinarily be somewhat higher in the early part of a new fiscal year, the Committee also recognizes that it is recommending a permanent authorization even though it is only for a three-month period. Therefore, to accommodate these factors and in recognition of the aggressive program recommended on upper atmospheric research in the Physics and Astronomy program, the Committee has made a net reduction of \$26 million in the total Research and Development request, from \$730.6 million to \$704.6 million. This represents a reduction from approximately 27% of the FY 1976 authorization to an amount more closely approaching a quarterly equivalent, with the addition of \$4 million for the upper atmospheric research activity. This action parallels that taken by the House, a cut of \$30 million, without additional funding for the upper atmospheric research effort.

As set forth in Section 7 of the bill, the Committee has adopted the individual program levels requested by NASA as authorization ceilings for the transition period, with the exception of the Advanced Missions line item. NASA is provided the flexibility to conduct its activities on any individual program up to the originally requested amount provided the total of all such program amounts does not exceed the reduced total of \$704.6 million for Research and Development. The House also inserted the individual program ceiling amounts with the same flexibility in its action on the authorization bill, however, the House specified that the Aeronautics and Space Technology program cannot be reduced to support other programs. The Committee cannot concur with this action without further action to save harmless the many other high priority programs in this budget.

CONSTRUCTION OF FACILITIES

The Construction of Facilities authorization recommendation is for \$93,630,000 of which \$11,500,000 is for the transition period, July 1, 1976-September 30, 1976.

The fiscal year 1976 recommendation for \$82,130,000 consists of 6 line items, the largest item being one with ten projects for the Space Shuttle program estimated to cost \$47,220,000. Except for \$9,275,000 in the line item for Facility Planning and Design activities, the recommended funds will support facilities projects that are characterized by the extent to which they represent the modification of, rehabilitation of, or additions to existing facilities as compared with the construction of new facilities thereby maximizing utilization of the investment in existing facilities to support changing NASA mission requirements.

No individual line item facility projects are scheduled for initiation during the transition period. The funding recommended for this period, \$11,500,000, will support the ongoing type of facility activities, more specifically, smaller rehabilitation and modification projects, minor construction and/or additions to existing facility projects and facility planning and design work.

The table below identifies each facility item recommended, together with the estimated cost thereof, which is followed by a brief description of each project and the justification therefor.

Summary

FISCAL YEAR 1976		Amount
Item		
1. Modification of 11- by 11-foot transonic wind tunnel, Ames Research Center-----		\$2,695,000
[Addition to lunar sample curatorial facility, Lyndon B. Johnson Space Center-----		0]
2. Addition for composite model and metal finishing shops, Langley Research Center-----		1,940,000
3. Space shuttle facilities at various locations as follows:		
(a) Modifications to launch complex 39, John F. Kennedy Space Center-----		13,110,000
(b) Construction of Orbiter processing facility, John F. Kennedy Space Center-----		8,160,000
(c) Modifications for solid rocket booster processing facilities, John F. Kennedy Space Center-----		5,240,000
(d) Modifications for hypergolic checkout and refurbishment facilities, John F. Kennedy Space Center-----		6,940,000
(e) Modifications for launch equipment test facilities, John F. Kennedy Space Center-----		1,900,000
(f) Construction of Orbiter approach and landing test facilities, Flight Research Center, and Air Force Plant Number 42, Palmdale, California-----		1,680,000
(g) Construction of Shuttle/Carrier aircraft mating facilities, Flight Research Center, and Air Force Plant Number 42, Palmdale, California-----		3,890,000
(h) Modifications for crew training facilities, Lyndon B. Johnson Space Center-----		830,000
(i) Modification of the vibration and acoustic test facility, Lyndon B. Johnson Space Center-----		2,410,000
(j) Modifications for solid rocket booster component manufacturing and assembly facilities, undesignated location-----		3,000,000
4. Rehabilitation and modification of facilities at various locations, not in excess of \$500,000 per project-----		16,000,000
5. Minor construction of new facilities and additions to existing facilities at various locations, not in excess of \$250,000 per project-----		5,000,000
6. Facility planning and design not otherwise provided for-----		9,275,000
Total—fiscal year 1976-----		\$2,130,000
TRANSITION PERIOD		Amount
Item		
1. Rehabilitation and modification of facilities at various locations, not in excess of \$500,000 per project-----		\$7,000,000
2. Minor construction of new facilities and additions to existing facilities at various locations, not in excess of \$250,000 per project-----		2,000,000
3. Facility planning and design not otherwise provided for-----		2,500,000
Total-----		11,500,000

ADDITION TO LUNAR SAMPLE CURATORIAL FACILITY, LYNDON B. JOHNSON SPACE CENTER, \$0

COMMITTEE COMMENT

The Committee has been concerned about the adequacy of protection afforded to the lunar samples, acquired at a substantial cost to the Nation during the Apollo program. It has also reviewed the history of facilities provided for the lunar sample program, and it has weighed the present request for additional curatorial facilities against alternative approaches, program status, and budgetary requirements in general.

The Committee has some difficulty in accepting the fact that subsequent to the substantial investment in the Lunar Receiving Laboratory, Building 37, NASA is currently converting this building to support another function utilizing FY 1975 and anticipated FY 1976 funds. The question is immediately raised as to why provision for the lunar sample activity should not have a priority claim on existing facilities. This question has not been answered so as to persuade the Committee that the proper order of priorities has been established at this Center.

Against this background, the Committee is deleting this facility from the FY 1976 request. In so doing, it is recommending that NASA take such interim actions as necessary to assure that the lunar samples are appropriately protected, and study alternative measures to the facility expansion presented in the FY 1976 budget request.

NASA should report to the Committee on the interim measures and the study of alternatives in a timely fashion, and in no event later than October 15, 1975, indicating the actions it has taken and proposes to take.

Modifications for Hypergolic Checkout and Refurbishment Facilities, John F. Kennedy Space Center, \$6,940,000.

COMMITTEE COMMENT

The Committee advocates full funding for a facility project in order to promote the maximum efficiency and economy during the facility acquisition process. Exceptions to this approach are recognized when good and sufficient reason exists to phase a project such as self-sustaining entities in a large total dollar, multi-year undertaking. Accordingly, the Committee recommends full FY 1976 funding of this project to provide Hypergolic Checkout and Refurbishment facilities for the shuttle at the Kennedy Space Center, and it does not concur with \$637,000 deferral in this project made by the House.

Construction of Orbiter Approach and Landing Test Facilities, Flight Research Center and Air Force Plant Number 42, Palmdale, California, \$1,680,000.

COMMITTEE COMMENT

The Committee recommends full funding of this project for the reason stated in connection with the hypergolic facilities at the Kennedy Space Center. Accordingly, the Committee does not agree with the \$300,000 deferral in this project made by the House.

REHABILITATION AND MODIFICATION OF FACILITIES AT VARIOUS LOCATIONS, NOT IN EXCESS OF \$500,000 PER PROJECT

FISCAL YEAR 1976	\$16,000,000
TRANSITION PERIOD	7,000,000

COMMITTEE COMMENT

The House cut the NASA request for the transition period \$4,750,000, from \$8,750,000 to \$4,000,000. While the Committee is aware that the transition period request significantly exceeded a quarterly equivalent of the FY 1976 request, it recognizes that the line item does not represent a "level of effort" type activity, but rather it consists of individual projects with accompanying justifications and cost estimates. Further, the Committee recognizes that there is a significant backlog of such projects requiring accomplishment, all of which have a bearing on the capability of the NASA plant to support its research and development programs. Based upon the foregoing, the Committee believes that some additional support above a direct quarterly equivalent is warranted for this line item and accordingly, it is recommending \$7 million, a reduction of \$1,750,000 in the NASA request.

MINOR CONSTRUCTION OF NEW FACILITIES AND ADDITIONS TO EXISTING FACILITIES AT VARIOUS LOCATIONS, NOT IN EXCESS OF \$250,000 PER PROJECT

FISCAL YEAR 1976	\$5,000,000
TRANSITION PERIOD	2,000,000

COMMITTEE COMMENT

In its action on the bill, the House cut the NASA request for this item from \$2,950,000 to \$1,250,000, a reduction of \$1,700,000. The transition period request for this line item as in the case of that for the rehabilitation and modification of facilities substantially exceeded a quarterly equivalent of the FY 1976 request. The Committee recognizes the individual project nature of this line item and for reasons stated previously, believes that there is justification for some additional funding during the transition period. Accordingly, the Committee is recommending \$2 million for this line item, a reduction of \$950,000 in the NASA request.

FACILITY PLANNING AND DESIGN

FISCAL YEAR 1976	\$9,275,000
TRANSITION PERIOD	2,500,000

COMMITTEE COMMENT

Fiscal Year 1976—The House increased the budget request for this item by \$4,500,000, from \$9,275,000 to \$13,775,000 to provide funds for design activities in support of the two aeronautical research facilities added to the Construction of Facilities request. The Committee recommends approval of the original request, \$9,275,000, in view of the fact that it has not included these aeronautical research facilities in the bill.

Transition Period—The Committee is recommending \$2,500,000 for Facility Planning and Design for the transition period, a reduction of \$300,000 in the NASA request. The House approved the full amount requested by NASA for this item, \$2,800,000.

COMMITTEE COMMENT

Aeronautical Research Facilities.—The House added two aeronautical research facility projects, Section 1(b), (4) and (5) of the House bill, totaling \$40,000,000, to the FY 1976 Construction of Facilities request.

The first project, for \$12,500,000, consists of the first phase of a three phase project to upgrade the 40' x 80' subsonic wind tunnel at the Ames Research Center with a total estimated cost ranging from \$57.5 million to \$72.5 million. This project was not requested by NASA in its presentation to the Office of Management and Budget or to the Congress.

The second project, for \$27,500,000, involves the first phase of a two phase project to provide a new transonic research tunnel at the Langley Research Center with a total estimated cost ranging from \$65 million to \$70 million. This project also was not included in the NASA FY 1976 budget presentation.

Both of these facilities have been and still are an integral part of a joint Department of Defense-NASA study to provide the nation with the appropriate research capability to maintain its leadership in aeronautics. Testimony before the Committee indicates that initially DOD and NASA agreed on the need for separate transonic tunnels—the research tunnel to be provided by NASA and the development tunnel by the DOD. However, further study, partially dictated by rising costs for separate facilities and in part by technology developments in wind tunnel operation, has resulted in agreement that both capabilities can be achieved in one facility of a new design and that acquisition actions on the separate facilities should be discontinued.

The Committee fully understands the need for new and upgraded facilities to support future aeronautical research and development activities. However, in view of the developments on the transonic tunnel and the fact that neither facility was requested by NASA in FY 1976, the Committee does not concur with the action of the House in including these facility projects in the bill at this time.

RESEARCH AND PROGRAM MANAGEMENT

SUMMARY

Fiscal year 1976	Budget request	House action	Senate committee action
Personnel compensation	\$543,566,000		
Personnel benefits	50,551,000		
Benefits for former personnel	178,000		
Travel and transportation of persons	17,001,000		
Transportation of things	3,754,000		
Rent, communications and utilities	51,604,000		
Printing and reproduction	4,211,000		
Other services	90,041,000		
Supplies and materials	11,733,000		
Equipment	2,469,000		
Land and structures	475,000		
Grants, subsidies and contributions	50,000		
Insurance claims and indemnities	7,000		
Total	776,000,000	776,000,000	776,000,000
Transition period			
Total	213,800,000	213,800,000	213,800,000

COMMITTEE COMMENT

The Committee noted that the request for Research and Program Management for the Transition Period was approximately \$20 million higher than the direct quarterly equivalent of the amount recommended for the full fiscal year 1976. While this may appear to be a significant unbalancing of the budget requirements, the Committee also notes the fact that a large workmen's compensation payment is due in the transition quarter and that selected contracts for support services, limited to a one-year term, require renewal during this period. Accordingly, in view of these factors and to assure the availability of sufficient authorization while transitioning to the new fiscal year, the Committee is recommending adoption of the NASA request of \$213,800,000 for the transition period for this appropriations category.

COST AND BUDGET DATA

NASA's budget plan and request for authorization of appropriations for fiscal year 1976 is \$3,539,000,000, and for the transition period to the new fiscal year, July 1, 1976 through September 30, 1976, is \$958,000,000. This bill, H.R. 4700, as recommended by the Committee, authorizes appropriations to the National Aeronautics and Space Administration for fiscal year 1976 in the amount of \$3,544,710,000 and for the transition period in the amount of \$929,900,000. The amount for fiscal year 1976 is \$5,710,000 more than the Administration's budget request and the amount for the transition period is \$29,000,000 below the budget request. The differences are explained in this report.

While the requirements of Section 308(a) of the Congressional Budget and Impoundment Control Act of 1974 are not mandatory this year, estimates for the next five years of NASA budget (obligational) authority and outlays are provided for informational purposes without the benefit of inputs from the Congressional Budget Office. Further, since Section 403 of the Congressional Budget and Impoundment Control Act of 1974 has not been implemented, the Committee has received no data from the Congressional Budget Office pertaining to the amounts recommended in this bill and, therefore, is not including any comparison between this bill and such data.

[In billions of dollars]

Fiscal year:	Budget authority		Outlays	
	NASA estimate	Committee estimate	NASA estimate	Committee estimate
1976	3.539	3.545	3.498	3.503
Transition period	.959	.930	.905	.902
1977	3.625	3.658	3.600	3.620
1978	3.406	3.430	3.440	3.470
1979	3.010	3.030	3.110	3.134
1980	2.550	2.565	2.715	2.732

The above estimates are future year funding requirements for the continuation or completion of the NASA programs (including the development of the space shuttle) provided for in the bill. These estimates do not provide for the initiation of any new programs or projects after fiscal year 1977, contain no provision for the impact of future inflation, and do not provide for any administrative adjustments that may be required.

The Committee used the NASA estimate as a starting point to prepare its estimate. For fiscal year 1976, the Committee made selective reductions and increases in programs and projects with the net result of an increase of \$5,710,000. The Committee future year estimates are higher than the NASA estimates primarily due to the acceleration of activity on the severe storm weather satellite and the advanced earth resources survey instrument, and to the Committee's recommendation that NASA aggressively pursue the upper atmospheric research program authorized in Section 8 of the bill. The Committee added \$7 million to the fiscal year 1976 request to support the expansion of this latter activity and additional amounts will be required in subsequent years to support the program anticipated.

The estimates given in this report are not an estimate of what the NASA budget will be in future years. As existing programs and projects are phased out new programs and projects may be requested. The Congress will have an opportunity to exercise its judgment on these new programs and projects when authority and funds are requested to proceed with them. The Committee does expect, however, that the budgets for fiscal years 1979 and 1980 will approximate \$3.4 billion, in current year dollars, based upon the concept of a constant level budget adopted by the Congress and the Executive Branch in 1972. This \$3.4 billion concept through this decade has been outlined in detail in the Committee's presentation to the Senate Budget Committee in connection with the fiscal year 1976 concurrent resolution.

There are no funds authorized in this bill for financial assistance to State and local governments.

LEGISLATIVE CHANGES

The Committee considered four legislative amendments in its action on this NASA authorization bill.

Section 6 authorizes the National Aeronautics and Space Administration, when so provided in an appropriation act, to enter into a contract (or contracts) for tracking and data relay satellite services. The House, in its action on the fiscal year 1976 NASA authorization request, inserted a provision in Section 6 of its bill requiring that any such contract include a provision under which the government may acquire title, upon termination of the contract, to facilities, equipment, and spacecraft which were acquired in the performance of the contract under terms and conditions agreed upon in the contract. The Committee believed that this additional language unnecessarily restrained NASA's negotiation freedom in contracting for the service and that it is inconsistent with a dual purpose (NASA and commercial) satellite which might be proposed to provide the desired service. Accordingly, the Committee did not include an equivalent provision in Section 6.

Section 7 authorizes funds for the National Aeronautics and Space Administration for the transition period, July 1, 1976 through September 30, 1976, the purposes for which are discussed elsewhere in this report in conjunction with activities for fiscal year 1976. The bill, S. 573, specified total amounts only for the three appropriations categories—Research and Development, Construction of Facilities, and Research and Program Management. The Committee, in addition to reducing the amounts proposed for research and development and the construction of facilities, deleted the Advanced Missions program in R&D and inserted individual ceilings for the programs and activities funded under these two categories consistent with Section 1 of the bill pertaining to the authorization for fiscal year 1976. The House adopted a similar provision precluding however any reduction in the amount specified for the Aeronautical Research and Technology Program, and authorizing funds for the Advanced Missions program.

The Committee deleted Section 8 of S. 573 which would have authorized total amounts for each appropriations category for NASA for fiscal year 1977. Since separate legislative action will be undertaken on the fiscal year 1977 authorization request, no action is necessary at this time. There is no provision for fiscal year 1977 authorization in the House bill.

The Committee added a new Section 8 to the bill amending the National Aeronautics and Space Act of 1958, as amended, through the addition of a Title IV entitled, Upper Atmospheric Research, which would authorize and direct the National Aeronautics and Space Administration to develop and carry out a comprehensive program of research, technology and monitoring of the phenomena of the upper atmosphere. It is the view of the Committee that NASA is singularly equipped with the capabilities to initiate, coordinate and carry out the program necessary to acquire the data to provide the understanding for intelligent informed decisions on activities that may or may not have an adverse impact upon the upper atmosphere. The Committee believes that there is no coordinated and aggressive program now underway to provide the necessary data and it is the intent of this amendment to place responsibility for positive action on a significant national need for scientific data. It would not assign NASA any regulatory responsibility related to product usage and control. A hearing was held on this matter on January 29, 1975, and subsequently a bill addressing this need, S. 851, was introduced in the Senate on February 26, 1975, and referred to this Committee. This amendment incorporates the substance of S. 851. There is no equivalent provision in the House bill. (Additional background on this amendment appears under Committee Comment on the Physics and Astronomy Program.)

CHANGES IN EXISTING LAW

In compliance with subsection 4 of rule XXIX of the Standing Rules of the Senate changes in existing law made by the bill are shown as follows (existing law proposed to be omitted is enclosed in black brackets, new matter is printed in *italics*, existing law in which no change is proposed is shown in roman):

NATIONAL AERONAUTICS AND SPACE ACT OF 1958
Public Law 85-568 (72 Stat. 426)

* * * * *
TITLE IV—UPPER ATMOSPHERIC RESEARCH

PURPOSE AND POLICY

"SEC. 401. (a) *The purpose of this title is to authorize and direct the Administration to develop and carry out a comprehensive program of research, technology and monitoring of the phenomena of the upper atmosphere so as to provide for an understanding of and to maintain the chemical and physical integrity of the Earth's upper atmosphere.*

"(b) *The Congress declares that it is the policy of the United States to undertake an immediate and appropriate research, technology, and monitoring program that will provide for understanding the physics and chemistry of the Earth's upper atmosphere.*

DEFINITIONS

"SEC. 402. *For the purpose of this title the term "upper atmosphere" means that portion of the Earth's sensible atmosphere above the troposphere.*

PROGRAM AUTHORIZED

"SEC. 403. (a) *In order to carry out the purposes of this title the Administration in cooperation with other Federal agencies shall initiate and carry out a program of research, technology, monitoring and other appropriate activities directed to understanding the physics and chemistry of the upper atmosphere.*

"(b) *In carrying out the provisions of this title the Administration shall—*

"(1) *arrange for participation by the scientific and engineering community, of both the Nation's industrial organizations and institutions of higher education, in planning and carrying out appropriate research, in developing necessary technology and in making necessary observations and measurements;*

"(2) *provide, by way of grant, contract, scholarships or other arrangements, to the maximum extent practicable and consistent with other laws, for the widest practicable and appropriate participation of the scientific and engineering community in the program authorized by this title; and*

"(3) *make all results of the program authorized by this title available to the appropriate regulatory agencies and provide for the widest practicable dissemination of such results.*

INTERNATIONAL COOPERATION

"SEC. 404. *In carrying out the provisions of this title, the Administration, subject to the direction of the President and after consultation with the Secretary of State, shall make every effort to elicit the support and cooperation of appropriate scientists and engineers of other countries and international organizations.*

REPORT

"SEC. 405. *The Administration shall submit to the President, annually, for transmittal to the Congress, a report on the activities being carried out pursuant to this title, together with a description of accomplishments achieved in the implementation of this title.*"

SPACE BUDGETS OF OTHER AGENCIES

(The following table, the source for which is the Office of Management and Budget, shows new obligational authority of all Government agencies:)

SPACE ACTIVITIES OF THE U.S. GOVERNMENT--HISTORICAL SUMMARY AND 1976 BUDGET RECOMMENDATIONS
FEBRUARY 1975¹

[In millions of dollars (may not add due to rounding)]

	NASA		Department of Defense	ERDA	Com-merce	Interior	Agri-culture	NSF	Total space
	Total	Space ²							
1955	56.9	56.9	3.0						59.9
1956	72.7	72.7	30.3				7.3		117.3
1957	78.2	78.2	71.0	21.3			8.4		178.5
1958	117.3	117.3	205.6	21.3			3.3		347.9
1959	305.4	235.4	489.5	34.3					759.2
1960	523.6	461.5	560.9	43.3			.1		1,065.8
1961	964.0	926.0	813.9	67.7			.6		1,808.2
1962	1,824.9	1,796.8	1,298.2	147.8	50.7		1.3		3,294.8
1963	3,673.0	3,626.0	1,549.9	213.9	43.2		1.5		5,434.5
1964	5,099.7	5,046.3	1,599.3	210.0	2.8		3.0		6,861.4
1965	5,249.7	5,167.6	1,573.9	228.6	12.2		3.2		6,985.5
1966	5,174.9	5,094.5	1,688.8	186.8	26.5		3.2		6,999.8
1967	4,967.6	4,862.2	1,663.6	183.6	29.3		2.8		6,741.5
1968	4,588.8	4,452.5	1,921.8	145.1	28.1	0.2	0.5		6,551.4
1969	3,990.9	3,822.0	2,013.0	118.0	20.0	.2	.7		5,975.8
1970	3,745.8	3,547.0	1,678.4	102.8	8.0	1.1	.8		5,340.5
1971	3,311.2	3,101.3	1,512.3	94.8	27.4	1.9	.8		4,740.9
1972	3,306.6	3,071.0	1,407.0	55.2	31.3	5.8	1.6		4,574.7
1973	3,406.2	3,093.2	1,623.0	54.2	39.7	10.3	1.9		4,824.8
1974	3,036.9	2,758.5	1,766.0	41.7	60.2	9.0	3.1		4,640.3
Budget:									
1975 estimate	3,228.8	2,920.3	2,011.0	40.2	64.6	8.3	3.9	2.0	5,050.3
1976 estimate	3,536.6	3,222.4	2,191.0	43.8	73.7	8.3	5.8	2.4	5,547.4

¹ Historical amounts are estimates based on best data available.
² Excludes amounts for aircraft technology in 1959 and succeeding years. Amounts for NASA-NACA aircraft and space activities not separately identifiable prior to 1959.
³ Adjusted for net offsetting receipts.

SECTION-BY-SECTION ANALYSIS

Section 1, Subsections (a), (b), and (c) authorizes to be appropriated to the National Aeronautics and Space Administration funds, in the total amount of \$3,544,710,000, as follows: (a) for "Research and development," a total of 11 program line items aggregating the sum of \$2,686,580,000; (b) for "Construction of facilities," a total of 6 line items aggregating the sum of \$82,130,000; and, (c) for "Research and program management," \$776,000,000. Subsection (c) also authorizes to be appropriated such additional or supplemental amounts as may be necessary for increases in salary, pay, retirement, or other employee benefits authorized by law.

Subsection 1(d) authorizes the use of appropriations for "Research and development" without regard to the provisions of subsection 1(g) for: (1) items of a capital nature (other than the acquisition of land) required at locations other than NASA installations for the performance of research and development contracts; and (2) grants to non-profit 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 or organization. Moreover, each such grant shall be made under such conditions as the Administrator shall find necessary to insure that the United States will receive benefit therefrom adequate to justify the making of that grant.

In either case no funds may be used for the construction of a facility in accordance with the subsection 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) provides 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) authorizes the use of not to exceed \$35,000 of the "Research and program management" appropriation 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) provides that of the funds appropriated for "Research and development" and "Research and program management," not in excess of \$25,000 per project (including collateral equipment) may be used for construction of new, or additions to existing, facilities, and not in excess of \$50,000 per project (including collateral equipment) may be used for rehabilitation or modification of existing facilities; however, of the funds appropriated for "Research and development," not in excess of \$250,000 per project (including collateral equipment) may be used for construction of new facilities or additions to, or rehabilitation or modification of, existing facilities required for unforeseen programmatic needs.

Section 2. Section 2 authorizes upward variations of the sums authorized for the "Construction of facilities" line items (other than facility planning and design) of 10 per centum in the discretion of the Administrator or his designee, or 25 per centum following a report by the Administrator or his designee to the Committee on Science and Technology of the House of Representatives and the Committee on Aeronautical and Space Sciences of the Senate on the circumstances of such action, for the purpose of meeting 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 (1) through (5).

Section 3 provides 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 provides 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 Technology 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 expresses 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. Section 6 authorizes the National Aeronautics and Space Administration, when so provided in an appropriation Act, to enter into a contract (or contracts) for tracking and data relay satellite services. The Government would incur no costs under such contract prior to the furnishing of such services except that the contract could provide for the payment for contingent liability of the Government which may accrue in the event the Government should decide for its convenience to terminate the contract before the expiration of the contract period. Such tracking and data relay satellite services would be furnished to the Administration in accordance with applicable authorization and appropriation Acts. It is envisaged that facilities may be required to be provided under such a contract in order to provide such services. The bill would authorize the construction of such facilities on Government-owned land if there is included in the contract a provision under which the United States may, in accordance with terms and conditions agreed upon in the contract, acquire title to the facilities upon contract termination. In January of each year the Administrator would be required to report to the Committee on Science and Technology and the Committee on Appropriations of the House of Representatives and the Committee on Aeronautical and Space Sciences and the Committee on Appropriations of the Senate the projected aggregate contingent liability, through the next fiscal year, of the Government under termination provisions of any contract authorized under this section. It is specified that the authority of the National Aeronautics and Space Administration to enter into and maintain the contract (or contracts) authorized in this section shall remain in effect as long as provision therefor is included in acts authorizing appropriations to the National Aeronautics and Space Administration for subsequent fiscal years.

Section 7. Section 7 authorizes to be appropriated to the National Aeronautics and Space Administration funds, in addition to those amounts authorized under Section 1, necessary to cover the three-month transition period between the close of fiscal year 1976 on June 30, 1976, and the beginning of fiscal year 1977 on October 1, 1976. The appropriations so authorized are in the total amount of \$929,900,000 as follows: (a) for "Research and development," \$704,600,000 (b) for "Construction of facilities," \$11,500,000 and, (c) for "Research and program management," \$213,800,000. Such amounts become available no earlier than July 1, 1976. Subsection (c) also authorizes to be appropriated such additional or supplemental amounts as may be necessary for increases in salary, pay, retirement, or other employee benefits authorized by law. All of the limitations and other provisions of the Act applicable to amounts appropriated pursuant to subsections (a), (b) and (c) of Section 1 also apply to amounts appropriated pursuant to subsections (a), (b) and (c), respectively, of this section.

Section 8. Section 8 amends the National Aeronautics and Space Act of 1958, as amended, by the addition of a title IV, Upper Atmospheric Research. This title authorizes and directs the National Aeronautics and Space Administration to develop and carry out a comprehensive program of research, technology and monitoring of the phenomena of the upper atmosphere so as to provide for an understanding of and to maintain the chemical and physical integrity of the earth's upper atmosphere. In carrying out the program authorized by this title the National Aeronautics and Space Administration shall (a) arrange for participation by the scientific and engineering community of both industrial organizations and institutions of higher education, (b) provide, by way of grant, contract, scholarship or other arrangements for the widest practicable and appropriate participation by the scientific and engineering community, and (c) make all results of the program available to appropriate regulatory agencies and provide for the widest possible dissemination of results. Title IV requires the National Aeronautics and Space Administration, subject to the direction of the President and after consultation with the Secretary of State, to make every effort to enlist the support and cooperation of appropriate scientists and engineers of other countries and international organizations. Finally, the title requires the National Aeronautics and Space Administration to submit to the President, for transmittal to the Congress, an annual report on the activities being carried out together with a description of accomplishments achieved in the implementation of the title.

Section 9. Section 9 provides that the Act may be cited as the "National Aeronautics and Space Administration Authorization Act, 1976".

NASA AUTHORIZATION OF APPROPRIATIONS FOR
FISCAL YEAR 1976 AND TRANSITION PERIOD

JUNE 4, 1975.—Ordered to be printed

Mr. TEAGUE, from the committee of conference,
submitted the following

CONFERENCE REPORT

[To accompany H.R. 4700]

The committee of conference on the disagreeing votes of the two Houses on the amendment of the Senate to the bill (H.R. 4700) 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) Space Shuttle, \$1,206,000,000;
- (2) Space flight operations, \$203,100,000;
- (3) Advanced missions, \$2,000,000;
- (4) Physics and astronomy, \$162,800,000;
- (5) Lunar and planetary exploration, \$259,900,000;
- (6) Launch vehicle procurement, \$166,900,000;
- (7) Space applications, \$181,530,000;
- (8) Aeronautical research and technology, \$175,350,000;
- (9) Space and nuclear research and technology, \$74,900,000;
- (10) Energy technology applications, \$5,900,000;
- (11) Tracking and data acquisition, \$240,800,000;
- (12) Technology utilization, \$8,000,000;

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

(1) Modification of 11- by 11-foot transonic wind tunnel, Ames Research Center, \$2,895,000.

(2) Addition for composite model and metal finishing shops, Langley Research Center, \$1,940,000;

(3) Space shuttle facilities at various locations as follows:

(A) Modifications to launch complex 39, John F. Kennedy Space Center, \$13,110,000;

(B) Construction of Orbiter processing facility, John F. Kennedy Space Center, \$8,160,000;

(C) Modifications for solid rocket booster processing facilities, John F. Kennedy Space Center, \$5,240,000;

(D) Modifications for hypergolic checkout and refurbishment facilities, John F. Kennedy Space Center, \$6,940,000;

(E) Modifications for launch equipment test facilities, John F. Kennedy Space Center, \$1,960,000;

(F) Construction of Orbiter approach and landing test facilities, Flight Research Center, and Air Force Plant #42, Palmdale, California, \$1,880,000

(G) Construction of Shuttle/Carrier aircraft mating facilities, Flight Research Center, and Air Force Plant #42, Palmdale, California, \$3,890,000;

(H) Modifications for crew training facilities, Lyndon B. Johnson Space Center, \$230,000;

(I) Modification of the vibration and acoustic test facility, Lyndon B. Johnson Space Center, \$2,410,000;

(J) Modifications for solid rocket booster component manufacturing and assembly facilities (location to be designated), \$3,000,000;

(4) Modification of 40-by-80 foot subsonic wind tunnel, Ames Research Center, \$12,500,000;

(5) Rehabilitation and modification of facilities at various locations, not in excess of \$500,000 per project, \$16,000,000;

(6) Minor construction of new facilities and additions to existing facilities at various locations, not in excess of \$250,000 per project, \$5,000,000;

(7) Facility planning and design not otherwise provided for, \$13,775,000.

(c) For "Research and program management," \$776,000,000, and such additional or supplemental amounts as may be necessary for increases in salary, pay, retirement, or other employee benefits authorized by law.

(d) Notwithstanding the provisions of subsection 1 (g), 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 at locations other than installations of the Administration 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 in accordance with this subsection for the 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 Technology 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 \$25,000, for scientific consultations of 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) Of the funds appropriated pursuant to subsections 1(a) and 1(c), not in excess of \$25,000 for each project, including collateral equipment, may be used for construction of new facilities and additions to existing facilities, and not in excess of \$50,000 for each project, including collateral equipment, may be used for rehabilitation or modification of facilities: Provided, That of the funds appropriated pursuant to subsection 1(a), not in excess of \$250,000 for each project, including collateral equipment, may be used for any of the foregoing for unforeseen programmatic needs.

Sec. 2. Authorization is hereby granted whereby any of the amounts prescribed in paragraphs (1) through (6), inclusive, of subsection 1(b)—

(1) in the discretion of the Administrator or his designee, may be varied upward 10 per centum, or

(2) following a report by the Administrator or his designee to the Committee on Science and Technology of the House of Representatives and the Committee on Aeronautical and Space Sciences of the Senate on the circumstances of such action, may be varied upward 25 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 (7) 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 Technology 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 Technology or the Senate Committee on Aeronautical and Space Sciences.

(2) no amounts 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. The National Aeronautics and Space Administration is authorized, when so provided in an appropriation Act, to enter into a contract for tracking and data relay satellite services. Such services

shall be furnished to the National Aeronautics and Space Administration in accordance with applicable authorization and appropriation Acts. The Government shall incur no costs under such contract prior to the furnishing of such services except that the contract may provide for the payment for contingent liability of the Government which may accrue in the event the Government should decide for its convenience to terminate the contract before the end of the period of the contract. Facilities which may be required in the performance of the contract may be constructed on Government-owned lands if there is included in the contract a provision under which the Government may acquire title to the facilities, under terms and conditions agreed upon in the contract, upon termination of the contract.

The Administrator shall in January of each year report to the Committee on Science and Technology and the Committee on Appropriations of the House of Representatives and the Committee on Aeronautical and Space Sciences and the Committee on Appropriations of the Senate the projected aggregate contingent liability of the Government under termination provisions of any contract authorized in this section through the next fiscal year. The authority of the National Aeronautics and Space Administration to enter into and to maintain the contract authorized hereunder shall remain in effect as long as provision therefor is included in Acts authorizing appropriations to the National Aeronautics and Space Administration for subsequent fiscal years.

Sec. 7. In addition to the amounts authorized to be appropriated under section 1 of this Act, there is hereby authorized to be appropriated to the National Aeronautics and Space Administration, to be available no earlier than July 1, 1976:

(a) For "Research and development," for the programs specified in the following paragraphs, \$700,000,000, of which no more shall be available for any such program than the amount stipulated (for that program) in the applicable paragraph:

- (1) Space Shuttle, \$321,000,000;
- (2) Space flight operations, \$55,100,000;
- (3) Advanced missions, \$500,000;
- (4) Physics and astronomy, \$46,600,000;
- (5) Lunar and planetary exploration, \$73,300,000;
- (6) Launch vehicle procurement, \$40,400,000;
- (7) Space applications, \$54,700,000;
- (8) Aeronautical research and technology, \$46,800,000;
- (9) Space and nuclear research and technology, \$2,300,000;
- (10) Energy technology applications, \$1,500,000;
- (11) Tracking and data acquisition, \$66,400,000;
- (12) Technology utilization, \$2,000,000.

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

- (1) Rehabilitation and modification of facilities at various locations, not in excess of \$500,000 per project, \$7,000,000;
- (2) Minor construction of new facilities and additions to existing facilities at various locations, not in excess of \$250,000 per project, \$1,250,000;
- (3) Facility planning and design not otherwise provided for, \$2,500,000.

(c) For "Research and program management," \$213,800,000, and such additional or supplemental amounts as may be necessary for increases in salary, pay, retirement, or other employee benefits authorized by law.

All of the limitations and other provisions of this Act which are applicable to amounts appropriated pursuant to subsections (a), (b), and (c) of section 1 of this Act shall apply in the same manner to amounts appropriated pursuant to subsections (a), (b), and (c), respectively, of this section.

Sec. 8. The National Aeronautics and Space Act of 1958, as amended, is amended by adding at the end thereof the following new title:

"TITLE IV—UPPER ATMOSPHERIC RESEARCH

"PURPOSE AND POLICY

"Sec. 401. (a) The purpose of this title is to authorize and direct the Administration to develop and carry out a comprehensive program of research, technology, and monitoring of the phenomena of the upper atmosphere so as to provide for an understanding of and to maintain the chemical and physical integrity of the Earth's upper atmosphere.

"(b) The Congress declares that it is the policy of the United States to undertake an immediate and appropriate research, technology, and monitoring program that will provide for understanding the physics and chemistry of the Earth's upper atmosphere.

"DEFINITIONS

"Sec. 402. For the purpose of this title the term 'upper atmosphere' means that portion of the Earth's sensible atmosphere above the troposphere.

"PROGRAM AUTHORIZED

"Sec. 403. (a) In order to carry out the purposes of this title the Administration in cooperation with other Federal agencies, shall initiate and carry out a program of research, technology, monitoring, and other appropriate activities directed to understand the physics and chemistry of the upper atmosphere.

"(b) In carrying out the provisions of this title the Administration shall—

"(1) arrange for participation by the scientific and engineering community, of both the Nation's industrial organizations and institutions of higher education, in planning and carrying out appropriate research, in developing necessary technology and in making necessary observations and measurements;

"(2) provide, by way of grant, contract, scholarships or other arrangements, to the maximum extent practicable and consistent with other laws, for the widest practicable and appropriate participation of the scientific and engineering community in the program authorized by this title; and

"(3) make all results of the program authorized by this title available to the appropriate regulatory agencies and provide for the widest practicable dissemination of such results.

"INTERNATIONAL COOPERATION

"SEC. 404. In carrying out the provisions of this title, the Administration, subject to the direction of the President and after consultation with the Secretary of State, shall make every effort to enlist the support and cooperation of appropriate scientists and engineers of other countries and international organizations."

Sec. 9. This Act may be cited as the "National Aeronautics and Space Administration Authorization Act, 1976".

And the Senate agree to the same.

OLIN E. TEAGUE,
DON FUQUA,
THOMAS N. DOWNING,
J. W. SYMINGTON,
WALTER FLOWERS,
DALE MILFORD,
ROBERT A. ROE,
C. A. MOSHER,
LARRY WINN, JR.,
JOHN W. WYDLER.

Managers on the Part of the House

FRANK E. MOSS,
JOHN C. STENNIS,
HOWARD W. CANNON,
BARRY GOLDWATER,
PETE V. DOMENICI,

Managers on the Part of the Senate.

JOINT EXPLANATORY STATEMENT OF THE
COMMITTEE OF CONFERENCE

The managers on the part of the House and the Senate at the conference on the disagreeing votes of the two Houses on the amendment of the Senate to the bill (H.R. 4700) to authorize appropriations to the National Aeronautics and Space Administration for fiscal year 1976 and for the transition period, July 1, 1976 through September 30, 1976, for research and development, construction of facilities, and research and program management and for other purposes, submit the following joint statement to the House and the Senate in explanation of the effect of the action agreed upon by the managers and recommended in the accompanying conference report:

The NASA request for fiscal year 1976 totaled \$3,539,000,000. The House authorized \$3,585,873,000 and the Senate amendment authorized \$3,544,710,000. The committee of conference agrees to a total authorization for fiscal year 1976 of \$3,562,310,000 as follows:

CONGRESSIONAL ADJUSTMENTS TO NASA, FISCAL YEAR 1976 BUDGET REQUEST

Fiscal year 1976	Budget request	House	Senate	Committee of conference
Research and development:				
Space Shuttle.....	\$1,206,000,000	\$1,206,000,000	\$1,206,000,000	\$1,206,000,000
Space flight operations.....	207,100,000	203,100,000	203,100,000	203,100,000
Advanced missions.....	1,500,000	3,000,000	0	2,000,000
Physics and astronomy.....	155,800,000	156,800,000	162,800,000	162,800,000
Lunar and planetary exploration.....	259,900,000	258,900,000	259,900,000	259,900,000
Launch vehicle procurement.....	166,900,000	166,900,000	166,900,000	166,900,000
Space applications.....	175,030,000	181,530,000	183,930,000	181,530,000
Aeronautical research and technology.....	175,350,000	175,350,000	175,350,000	175,350,000
Space and nuclear research and technology.....	74,900,000	76,900,000	74,900,000	74,900,000
Energy technology applications.....	5,900,000	5,900,000	5,900,000	5,900,000
Tracking and data acquisition.....	243,000,000	240,800,000	240,800,000	240,800,000
Technology utilization.....	7,000,000	9,000,000	7,000,000	8,000,000
Total.....	2,678,380,000	2,684,180,000	2,686,580,000	2,587,180,000
Construction of facilities.....	84,620,000	125,693,000	82,130,000	99,130,000
Research and program management.....	776,000,000	776,000,000	776,000,000	776,000,000
Grand total.....	3,539,000,000	3,585,873,000	3,544,710,000	3,562,310,000

The NASA request for the transition period totaled \$953,900,000. The House authorized \$922,450,000 and the Senate amendment authorized \$929,900,000. The committee of conference agrees to a total authorization of \$925,150,000 as follows:

CONGRESSIONAL ADJUSTMENTS TO NASA REQUEST FOR TRANSITION PERIOD—JULY 1, 1976 THROUGH SEPT. 30, 1976

	Budget request	House	Senate	Committee of conference
Research and development.....	730,600,000	700,600,000	704,600,000	700,600,000
Construction of facilities.....	14,500,000	8,050,000	11,500,000	10,750,000
Research and program management.....	213,800,000	213,800,000	213,800,000	213,800,000
Total.....	958,900,000	922,450,000	929,900,000	925,150,000

The points in disagreement and the conference resolution of them are as follows:

FISCAL YEAR 1976

1. The House authorized \$3 million for the Advanced missions program, adding \$1.5 million to the NASA request.

The Senate did not include this line item in its bill.

The conference substitute authorizes \$2 million for the Advanced missions program.

The conferees agreed that overall advanced mission planning is a vital function within NASA. However, such planning should be an integrated function encompassing all aspects of the Agency's space responsibilities, particularly in view of the advent of the space transportation system. Since presentation of this line item projects an artificial distinction between activities which is no longer appropriate the conferees agree that, beginning with the fiscal year 1977 budget, NASA should discontinue the use of the Advanced Missions line item.

2. NASA requested \$155,800,000 for the Physics and astronomy program. The House authorized \$156,800,000, adding \$1 million to this program for additional investigations of chlorine compounds in the atmosphere.

The Senate authorized \$162,800,000 for this program, \$7 million above the request and \$6 million above the amount authorized by the House to support an enhanced and aggressive upper atmospheric research program. The Senate addition is complementary to the legislation included in Section 8 of its amendment authorizing and directing NASA to develop and carry out a comprehensive program of research, technology and monitoring of the phenomena of the upper atmosphere.

The conference substitute adopts the Senate amount for the Physics and astronomy program.

3. The House authorized \$258,900,000 for the Lunar and planetary program, a reduction of \$1,000,000 in the NASA request.

The Senate authorized \$259,900,000, identical with the NASA request.

The committee of conference adopts the Senate position.

4. The House approved \$181,530,000 for the Space applications program, an increase of \$6,500,000 in the NASA request.

The Senate authorized \$183,930,000.

The committee of conference adopts the House position authorizing \$181,530,000, emphasizing that the additional \$6,500,000 authorized is to augment and strengthen research and development programs in the areas of severe storm research, earth resources development and Space Shuttle payload studies.

The conferees also note the need for timely actions to assure continuity of remote sensing of earth resources data from space.

5. The House authorized \$76,900,000 for Space and nuclear research and technology.

The Senate authorized \$74,900,000, the original NASA request.

The committee of conference adopts the Senate position authorizing \$74,900,000.

6. The House authorized \$9,000,000 for the Technology utilization program, an increase of \$2,000,000 in the NASA request, \$1,000,000 of which was to provide additional support for NASA applications

teams and \$1,000,000 of which was to accelerate documentation and dissemination activities including expansion of services to industry.

The Senate authorized \$7,000,000, agreeing with the NASA request. The conference substitute authorizes \$8,000,000.

The conferees agree that in the expansion of the network of industrial applications centers through the establishment of applications divisional offices NASA should assure that service will be provided to the numerous industrial areas of the nation that are now relatively remote from any NASA Center or technology utilization dissemination center and that no new facility should be located in an area which can reasonably be serviced by an established NASA Center.

7. The House authorized \$6,303,000 for modifications for hypersonic checkout and refurbishment facilities for the Space Shuttle program at the John F. Kennedy Space Center, a reduction of \$637,000 in the NASA request for this facilities project.

The Senate authorized the full amount of the NASA request. \$6,940,000.

The conference substitute adopts the Senate position.

8. The NASA requested \$1,680,000 for the construction of orbiter approach and landing test facilities at the Flight Research Center and Air Force Plant No. 42, Palmdale, Calif. The House authorized \$1,380,000, a reduction of \$300,000 in the NASA request.

The Senate authorized \$1,680,000.

The Conference substitute adopts the Senate position.

9. The House authorized \$12,500,000 to initiate the first phase of a three-phase program to upgrade the capability of the 40' x 80' aeronautical research wind tunnel at the Ames Research Center. This project was not included in the NASA budget request.

The Senate did not include this facility project in its amendment.

The conference substitute adopts the House position authorizing \$12,500,000 for this facility project.

10. The House authorized \$27,500,000 to initiate the first phase of a two-phase program to construct a new transonic research tunnel for advanced aeronautical research at the Langley Research Center. NASA did not include this facility project in its budget request.

The Senate did not include this item in its amendment to the bill.

The conference substitute adopts the Senate position.

11. NASA requested \$9,275,000 for Facility Planning and Design activities for fiscal year 1976. The House authorized \$13,775,000, increasing the request by \$4,500,000 to provide for design and engineering services for expanding the 40' x 80' wind tunnel at the Ames Research Center and for a new transonic research tunnel at the Langley Research Center, both of which are advanced aeronautical research facility projects.

The Senate authorized \$9,275,000, identical with the NASA request.

The conference substitute authorizes \$13,775,000, recognizing that design work on a third leg for the 40' x 80' tunnel is required and that the NASA and Air Force requirements for transonic research facilities require redefinition in order to provide advanced transonic aeronautical research capability.

The conferees agree that reprogramming authority is available for NASA to make the most appropriate use of funds available to assure adequate national aeronautical research facilities.

TRANSITION PERIOD

12. NASA requested a lump sum amount of \$730,600,000 for research and development for the transition period, July 1, 1976, through September 30, 1976. The House authorized \$700,600,000 for research and development, establishing ceiling amounts for the twelve programs constituting the research and development appropriation. Inasmuch as the total of the program ceilings equated to the original NASA request, the House authorized NASA to fund the several programs within those ceilings up to the total of \$700,600,000 except that the entire amount stipulated for the Aeronautical research and technology program was to be available only for that program.

The Senate authorized \$704,600,000 for research and development for the transition period and established identical ceiling amounts as the House for all programs except advanced missions which was not included as a specified program. The Senate did not provide any restriction on the amount to be used for the Aeronautical research and technology program. Further, it was the intent of the Senate that \$4,000,000 of the total amount authorized for Research and development be applied to the upper atmospheric research activity which would be an addition to those amounts already included in the budget request for such activity during the transition period.

The conference substitute authorizes \$700,600,000 for Research and development for the transition period, stipulating ceiling amounts for the twelve research and development programs included therein, and allows NASA the flexibility to apply the authorized funds to the various programs provided that the stipulated ceiling for any program is not exceeded.

13. NASA requested a lump sum of \$14,500,000 for the Construction of facilities for the transition period. The House authorized a total of \$8,050,000 stipulating that \$4,000,000 was for the rehabilitation and modifications of facilities, at various locations, not in excess of \$500,000 per project. \$1,250,000 was for the minor construction of new facilities and additions to existing facilities at various locations, not in excess of \$250,000 per project, and that \$2,800,000 was for facility planning and design activities.

The Senate authorized \$11,500,000 for the Construction of facilities for the transition period stipulating that \$7,000,000 was for the rehabilitation and modification of facilities at various locations, not in excess of \$500,000 per project, \$2,000,000 was for minor construction of new facilities and additions to existing facilities at various locations, not in excess of \$250,000 per project, and that \$2,500,000 was for facility planning and design work.

The conference substitute authorizes three line items for the Construction of facilities for the transition period with amounts as follows: (1) rehabilitation and modification of facilities at various locations, not in excess of \$500,000 per project, \$7,000,000; (2) minor construction of new facilities and additions to existing facilities at various locations, not in excess of \$250,000 per project, \$1,250,000; and (3) facility planning and design not otherwise provided for, \$2,500,000.

LEGISLATIVE PROVISIONS

14. The House inserted in Section 6 the following language: "The contract shall include a provision under which the Government may acquire title, upon termination of the contract, to facilities, equipment, and spacecraft which have been acquired in the performance of the contract, under terms and conditions agreed upon in the contract."

The Senate deleted this language from the Bill.

The committee of conference adopts the Senate position on the basis that wording in the request for proposal associated with the project will facilitate the intent of the House language.

15. The Senate amendment added a Section 8 to the bill, amending the National Aeronautics and Space Act of 1958, as amended, through the addition of "Title IV—Upper Atmospheric Research", authorizing and directing the NASA to develop and carry out a comprehensive program of research, technology, and monitoring of the phenomena of the upper atmosphere so as to provide for an understanding of and to maintain the chemical and physical integrity of the earth's upper atmosphere.

The House bill did not contain such a provision.

The conference substitute adopts the Senate amendment except that Section 405 of Title IV requiring a special report on activities carried out pursuant to Title IV is deleted.

The conferees agree that a complete and comprehensive report on the activities being carried out under the upper atmospheric research program provided for under this new Title IV should be included in the Aeronautics and Space Report of the President submitted annually to the Congress.

OLIN E. TEAGUE,
DON FUQUA,
THOMAS N. DOWNING,
J. W. SYMINGTON,
WALTER FLOWERS,
DALE MILFORD,
ROBERT A. ROE,
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Managers on the Part of the House.

FRANK E. MOSS,
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BARRY GOLDWATER,
PETE V. DOMENICI,

Managers on the Part of the Senate.

○



Public Law 94-39
94th Congress, H. R. 4700
June 19, 1975

An Act

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) Space Shuttle, \$1,206,000,000;
- (2) Space flight operations, \$203,100,000;
- (3) Advanced missions, \$2,000,000;
- (4) Physics and astronomy, \$162,800,000;
- (5) Lunar and planetary exploration, \$259,900,000;
- (6) Launch vehicle procurement, \$166,900,000;
- (7) Space applications, \$181,530,000;
- (8) Aeronautical research and technology, \$175,350,000;
- (9) Space and nuclear research and technology, \$74,900,000;
- (10) Energy technology applications, \$5,900,000;
- (11) Tracking and data acquisition, \$240,800,000;
- (12) Technology utilization, \$8,000,000;

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

- (1) Modification of 11- by 11-foot transonic wind tunnel, Ames Research Center, \$2,695,000.
- (2) Addition for composite model and metal finishing shops, Langley Research Center, \$1,940,000;
- (3) Space shuttle facilities at various locations as follows:
 - (A) Modifications to launch complex 39, John F. Kennedy Space Center, \$13,110,000;
 - (B) Construction of Orbiter processing facility, John F. Kennedy Space Center, \$8,160,000;
 - (C) Modifications for solid rocket booster processing facilities, John F. Kennedy Space Center, \$5,240,000;
 - (D) Modifications for hypergolic checkout and refurbishment facilities, John F. Kennedy Space Center, \$6,940,000;
 - (E) Modifications for launch equipment test facilities, John F. Kennedy Space Center, \$1,960,000;
 - (F) Construction of Orbiter approach and landing test facilities, Flight Research Center, and Air Force Plant #42, Palmdale, California, \$1,680,000;
 - (G) Construction of Shuttle/Carrier aircraft mating facilities, Flight Research Center, and Air Force Plant #42, Palmdale, California, \$3,890,000;
 - (H) Modifications for crew training facilities, Lyndon B. Johnson Space Center, \$830,000;
 - (I) Modification of the vibration and acoustic test facility, Lyndon B. Johnson Space Center, \$2,410,000;
 - (J) Modifications for solid rocket booster component manufacturing and assembly facilities (location to be designated), \$3,000,000;

National
Aeronautics
and Space
Administration
Authorization
Act, 1976,
Research and
development,

Construction of
facilities,

Research
and pro-
gram man-
agement,
Program
specifica-
tions,

Notice to
Congress,

Limitations,

(4) Modification of 40-by-80 foot subsonic wind tunnel, Ames Research Center, \$12,500,000;

(5) Rehabilitation and modification of facilities at various locations, not in excess of \$500,000 per project, \$16,000,000;

(6) Minor construction of new facilities and additions to existing facilities at various locations, not in excess of \$250,000 per project, \$5,000,000;

(7) Facility planning and design not otherwise provided for, \$13,775,000.

(c) For "Research and program management," \$776,000,000, and such additional or supplemental amounts as may be necessary for increases in salary, pay, retirement, or other employee benefits authorized by law.

(d) Notwithstanding the provisions of subsection 1(g), 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 at locations other than installations of the Administration 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 in accordance with this subsection for the 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 Technology 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 of 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) Of the funds appropriated pursuant to subsections 1(a) and 1(c), not in excess of \$25,000 for each project, including collateral equipment, may be used for construction of new facilities and additions to existing facilities, and not in excess of \$50,000 for each project, including collateral equipment, may be used for rehabilitation or modification of facilities; *Provided*, That of the funds appropriated pursuant to subsection 1(a), not in excess of \$250,000 for each project, including collateral equipment, may be used for any of the foregoing for unforeseen programmatic needs.

SEC. 2. Authorization is hereby granted whereby any of the amounts prescribed in paragraphs (1) through (6), inclusive, of subsection 1(b)—

- (1) in the discretion of the Administrator or his designee, may be varied upward 10 per centum, or
- (2) following a report by the Administrator or his designee to the Committee on Science and Technology of the House of Representatives and the Committee on Aeronautical and Space Sciences of the Senate on the circumstances of such action, may be varied upward 25 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 (7) 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 Technology 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 Technology or the Senate Committee on Aeronautical and Space Sciences,
- (2) no amounts 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.

Construction cost variations.

Report to congressional committees.

Transfer of funds.

Report to Congress.

Use of funds, restriction.

Notice to Congress.

Research funds, geographical distribution, 42 USC 2459 note, Satellite services, contract authorization, 42 USC 2463.

Report to congressional committees.

Additional authorizations.

Research and development.

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. The National Aeronautics and Space Administration is authorized, when so provided in an appropriation Act, to enter into a contract for tracking and data relay satellite services. Such services shall be furnished to the National Aeronautics and Space Administration in accordance with applicable authorization and appropriation Acts. The Government shall incur no costs under such contract prior to the furnishing of such services except that the contract may provide for the payment for contingent liability of the Government which may accrue in the event the Government should decide for its convenience to terminate the contract before the end of the period of the contract. Facilities which may be required in the performance of the contract may be constructed on Government-owned lands if there is included in the contract a provision under which the Government may acquire title to the facilities, under terms and conditions agreed upon in the contract, upon termination of the contract.

The Administrator shall in January of each year report to the Committee on Science and Technology and the Committee on Appropriations of the House of Representatives and the Committee on Aeronautical and Space Sciences and the Committee on Appropriations of the Senate the projected aggregate contingent liability of the Government under termination provisions of any contract authorized in this section through the next fiscal year. The authority of the National Aeronautics and Space Administration to enter into and to maintain the contract authorized hereunder shall remain in effect as long as provision therefor is included in Acts authorizing appropriations to the National Aeronautics and Space Administration for subsequent fiscal years.

SEC. 7. In addition to the amounts authorized to be appropriated under section 1 of this Act, there is hereby authorized to be appropriated to the National Aeronautics and Space Administration, to be available no earlier than July 1, 1976:

(a) For "Research and development," for the programs specified in the following paragraphs, \$700,600,000, of which no more shall be available for any such program than the amount stipulated (for that program) in the applicable paragraph:

- (1) Space Shuttle, \$321,000,000;
- (2) Space flight operations, \$55,100,000;
- (3) Advanced missions, \$500,000;
- (4) Physics and astronomy, \$46,600,000;
- (5) Lunar and planetary exploration, \$73,300,000;
- (6) Launch vehicle procurement, \$40,400,000;
- (7) Space applications, \$54,700,000;
- (8) Aeronautical research and technology, \$46,800,000;
- (9) Space and nuclear research and technology, \$22,300,000;

- (10) Energy technology applications, \$1,500,000;
 (11) Tracking and data acquisition, \$66,400,000;
 (12) Technology utilization, \$2,000,000.

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

- (1) Rehabilitation and modification of facilities at various locations, not in excess of \$500,000 per project, \$7,000,000;
 (2) Minor construction of new facilities and additions to existing facilities at various locations, not in excess of \$250,000 per project, \$1,250,000;
 (3) Facility planning and design not otherwise provided for, \$2,500,000.

(c) For "Research and program management," \$213,800,000, and such additional or supplemental amounts as may be necessary for increases in salary, pay, retirement, or other employee benefits authorized by law.

All of the limitations and other provisions of this Act which are applicable to amounts appropriated pursuant to subsections (a), (b), and (c) of section 1 of this Act shall apply in the same manner to amounts appropriated pursuant to subsections (a), (b), and (c), respectively, of this section.

SEC. 8. The National Aeronautics and Space Act of 1958, as amended, is amended by adding at the end thereof the following new title:

"TITLE IV—UPPER ATMOSPHERIC RESEARCH

"PURPOSE AND POLICY

"SEC. 401. (a) The purpose of this title is to authorize and direct the Administration to develop and carry out a comprehensive program of research, technology, and monitoring of the phenomena of the upper atmosphere so as to provide for an understanding of and to maintain the chemical and physical integrity of the Earth's upper atmosphere.

"(b) The Congress declares that it is the policy of the United States to undertake an immediate and appropriate research, technology, and monitoring program that will provide for understanding the physics and chemistry of the Earth's upper atmosphere.

"DEFINITIONS

"SEC. 402. For the purpose of this title the term 'upper atmosphere' means that portion of the Earth's sensible atmosphere above the troposphere.

"PROGRAM AUTHORIZED

"SEC. 403. (a) In order to carry out the purposes of this title the Administration in cooperation with other Federal agencies, shall initiate and carry out a program of research, technology, monitoring, and other appropriate activities directed to understand the physics and chemistry of the upper atmosphere.

"(b) In carrying out the provisions of this title the Administration shall—

- "(1) arrange for participation by the scientific and engineering community, of both the Nation's industrial organizations and

Construction of facilities.

Research and program management.

42 USC 2484.

Short title.

42 USC 2451 note.

42 USC 246L.

42 USC 2482.

42 USC 2483.

institutions of higher education, in planning and carrying out appropriate research, in developing necessary technology and in making necessary observations and measurements;

"(2) provide, by way of grant, contract, scholarships or other arrangements, to the maximum extent practicable and consistent with other laws, for the widest practicable and appropriate participation of the scientific and engineering community in the program authorized by this title; and

"(3) make all results of the program authorized by this title available to the appropriate regulatory agencies and provide for the widest practicable dissemination of such results.

"INTERNATIONAL COOPERATION

"SEC. 404. In carrying out the provisions of this title, the Administration, subject to the direction of the President and after consultation with the Secretary of State, shall make every effort to enlist the support and cooperation of appropriate scientists and engineers of other countries and international organizations."

SEC. 9. This Act may be cited as the "National Aeronautics and Space Administration Authorization Act, 1976".

Approved June 19, 1975.

LEGISLATIVE HISTORY:

HOUSE REPORTS: No. 94-63 (Comm. on Science and Technology) and No. 94-259 (Comm. of Conference).

SENATE REPORT No. 94-103 (Comm. on Aeronautical and Space Sciences).

CONGRESSIONAL RECORD, Vol. 121 (1975):

Apr. 9, considered and passed House,
 May 12, considered and passed Senate, amended,
 June 9, House agreed to conference report,
 June 10, Senate agreed to conference report.

89 STAT. 223

94TH CONGRESS } HOUSE OF REPRESENTATIVES { REPORT
1st Session } { No. 94-313

DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT—INDEPENDENT AGENCIES APPROPRIATION BILL, 1976

JUNE 19, 1975.—Committed to the Committee of the Whole House on the State of the Union and ordered to be printed

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

REPORT

[To accompany H.R. 8070]

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

RESEARCH AND DEVELOPMENT

	<i>Fiscal year</i>	<i>Transition period</i>
1975 appropriation-----	\$2,331,015,000	
Estimate, 1976-----	2,678,350,000	\$730,600,000
Recommended in bill-----	2,628,980,000	700,000,000
Decrease below estimate-----	-49,400,000	-30,600,000

During the coming year, the National Aeronautics and Space Administration enters the new era of the space shuttle. With the completion of the Apollo-Soyuz mission, American men will not return to space until the first shuttle orbiter mission in 1979. The shuttle will make space flight routine. It will be reusable and will provide an economical space transportation system for a wide variety of users including the Government, private industry and international organizations.

The 1976 and transition budget request proposes continuation of the space shuttle; completion of the Apollo-Soyuz and Viking projects; various planetary, weather and scientific satellites; and further development of a strong aeronautics program. For the first time, no new starts are proposed in this budget.

The Committee recommends an appropriation of \$2,628,980,000 for 1976. This is a decrease of \$49,400,000 below the budget estimate. The bill also contains \$700,000,000 for the transition period which is a reduction of \$30,000,000 in line with the authorization level.

Within the total recommended, the following changes are made from the amounts requested in the current budget plan:

(1) The Committee directs that Pioneer Venus be deferred for one year to permit a budget priority decision in 1977 between the Large Space Telescope and Pioneer Venus. Some astronomers have been critical of NASA's Space Science program because they contend that a disproportionate level of NASA dollars have been used on planetary astronomy missions, while little or no funds have been allocated to deep space astronomy which is the principal mission of the Large Space Telescope. By delaying Pioneer Venus for one year, the Committee can make a budget priority choice between the Large Space Telescope and Pioneer Venus. A total of \$57,000,000 is requested for Pioneer Venus in fiscal year 1976. The recommendation reduces this request by \$18,400,000 and provides \$9,200,000 to maintain a management capability during the one year deferral.

It is not the intention of the Committee to eliminate Pioneer Venus. Rather, the Committee is deferring this program for one year in order to strike a budget priority between Pioneer Venus and the LST. It believes that such action will provide better justification for the use of limited resources.

(2) The Committee recommends that \$1,000,000 of the \$5,000,000 requested for continued studies of the Large Space Telescope be denied. It also recommends that the \$3,000,000 requested for LST studies in the transition period be reduced to \$2,000,000. These funds taken together with the \$3,000,000 provided for this purpose in 1975 should be sufficient to complete LST planning.

CONSTRUCTION OF FACILITIES

	<i>Fiscal year</i>	<i>Transition period</i>
1975 appropriation.....	\$140,155,000	
Estimate, 1976.....	81,620,000	\$14,500,000
Recommended in bill.....	82,130,000	10,750,000
Decrease.....	2,490,000	-3,750,000

The Committee recommends \$82,130,000 for construction of facilities in 1976. This is a decrease of \$2,490,000 below the budget request. The bill also contains \$10,750,000 for the transition period, which is \$3,750,000 below the budget estimate in accord with the amount approved in the authorization bill.

The funds provided are the same as those requested except that the \$2,490,000 requested for the Lunar Curatorial Facility is denied. This decrease is consistent with a similar reduction made in the 1976 authorization bill.

The Committee also directs that no funds be used to begin work on modifying the 40 x 80 foot wind tunnel at the Ames Research Center until the Committee has had an opportunity to review the necessary funding in a formal budget request.

Finally, language has been included in the bill making funds available until expended for certain projects previously initiated.

RESEARCH AND PROGRAM MANAGEMENT

	<i>Fiscal year</i>	<i>Transition period</i>
1975 appropriation.....	\$775,512,000	
Estimate, 1976.....	776,000,000	\$213,678,000
Recommended in bill.....	5,512,000	213,678,000
Decrease.....	-488,000	-122,000

The Committee recommends \$775,512,000 for research and program management in 1976 and \$213,678,000 in the transition period. The decrease from the budget estimate reflects a ten percent reduction in the payment of GSA space rental charges.

The Committee is also recommending language in the bill permitting the replacement of five older aircraft with a more modern aircraft to provide for greater efficiency and safety. This will reduce operating costs by \$1,300,000 annually.

TITLE IV

GENERAL PROVISIONS

The Committee recommends that the general provisions applicable to the Department and agencies carried in the current fiscal year be continued in 1976 and the transition period, except that the general provision allowing the National Aeronautics and Space Administration to transfer up to one-quarter of one percent of the appropriations available between the research and development appropriation and the research and program management appropriation is no longer required.

The travel limitation carried in Sec. 401 has been modified to limit such expenses to not to exceed ten per centum above the amounts set forth therefor in the budget estimates submitted for the appropriations in the bill. This will permit some flexibility within each appropriation account for the payment of such expenses in view of recent legislation increasing per diem and other rates payable for travel expenses.

CHANGES IN THE APPLICATION OF EXISTING LAW

Pursuant to clause 3, Rule XXI of the House of Representatives, the following statements are submitted describing the effect of provisions in the accompanying bill which directly or indirectly change the application of existing law.

1. In many cases, the Committee has found it necessary to recommend funding for ongoing activities and programs where authorizations have not and probably will not be enacted before the beginning of the new fiscal year. This includes some or all of the programs under the Department of Housing and Urban Development, Consumer Product Safety Commission, Council and Office of Environmental Quality, Environmental Protection Agency, National Aeronautics and Space Administration, National Science Foundation and the Veterans Administration.

2. The bill includes, in most instances, special one-time appropriations for all agencies for the three-month transition period from July 1, 1976, to September 30, 1976, due to the change in the beginning of fiscal year 1977 from July 1, 1976, to October 1, 1976.

4. Sections 401 through 407 of Title IV of the bill contain a number of general provisions, all of which are essentially as carried in previous appropriation acts, which place limitations on the use of funds in the bill and which might, under some circumstances, be construed as changing the application of existing law.

PERMANENT NEW BUDGET (OBLIGATIONAL) AUTHORITY—TRUST FUNDS

Agency and item (1)	New budget (obligational) authority, 1975 (2)	Budget estimates of new budget (obligational) authority, 1976 (3)	Increase (+) or decrease (-) (4)
National Aeronautics and Space Administration: Miscellaneous trust funds (indefinite)-----	1,550,000	525,000	-1,025,000

COMPARATIVE STATEMENT OF NEW BUDGET (OBLIGATIONAL) AUTHORITY FOR FISCAL YEAR 1975 AND THE BUDGET ESTIMATES AND AMOUNTS RECOMMENDED IN THE BILL FOR FISCAL YEAR 1976 AND THE TRANSITION PERIOD

Agency and item (1)	New budget (obligational) authority, fiscal year 1975 (including pending supplementals) (2)	Budget estimates of new budget (obligational) authority, fiscal year 1976 and transition period ¹ (3)	New budget (obligational) authority recommended in bill (4)	Bill compared with—	
				New budget (obligational) authority, fiscal year 1975 (5)	Budget estimates of new budget (obligational) authority, fiscal year 1976 and transition period (6)
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION					
Research and development -----	2,331,015,000	2,678,380,000	2,628,980,000	+297,965,000	-49,400,000
Transition period-----		730,600,000	700,600,000		-30,000,000
Construction of facilities -----	140,155,000	84,620,000	82,130,000	-58,025,000	-2,490,000
Transition period-----		14,500,000	10,750,000		-3,750,000
Research and program management ---	759,975,000	776,000,000	775,512,000	+15,537,000	-488,000
Transition period-----		213,800,000	213,678,000		-122,000
Total, National Aeronautics and Space Administration-----	3,231,145,000	3,539,000,000	3,486,622,000	+255,477,000	-52,378,000
Transition period-----		958,900,000	925,028,000		-33,872,000

Calendar No. 319

94TH CONGRESS }
1st Session }

SENATE {

REPORT
No. 94-326

DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT—INDEPENDENT AGENCIES APPROPRIATION BILL, 1976

JULY 24 (legislative day, JULY 21), 1975.—Ordered to be printed

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

REPORT

[To accompany H.R. 8070]

The Committee has included \$3,543,022,000 for the programs of the National Aeronautics and Space Administration for fiscal 1976. This amount is \$56,400,000 above the House and \$4,022,000 above the budget estimate. This appropriation does not provide for any new starts but does permit an increase of approximately \$400,000,000 in funding for the space shuttle in fiscal 1976.

GENERAL PROVISIONS

The Committee agrees with the House that General Provisions applicable to the Department and agencies in fiscal 1975 and reiterated in Title IV should be controlling once again this year. The Committee also agrees that there is no further need for language allowing the National Aeronautics and Space Administration to transfer funds between the research and development appropriation and the research and program management appropriation.

Although the Committee generally agrees with the House decision to place a ten percent limitation on increases in travel expenditures above the originally budgeted amount as set forth in Section 401, an exception has been added to permit FHA appraisers and inspectors to exceed the limit. This will permit the Department of Housing and Urban Development to respond to any substantial unexpected increase in housing market activities.

The Committee concurs with the House in placing a limitation in Section 405 on space rental charges made by the General Services Administration of ninety percent of the standard charge. Although several agencies have indicated that the amounts provided in the House-passed bill for space rental are below this ninety percent standard, the Committee has not been convinced that this is the case. Consequently the Committee has concurred with House recommendations in making these reductions.

The Committee has added a provision to the bill as passed by the House which would prohibit the expenditure of unvouchered funds. The bill provides for a \$35,000 fund within the National Aeronautics and Space Administration "to be expended upon the approval of the Administrator and his determination shall be final and approval." The prohibition approved by the Committee as Section 408 would require that these funds as well as all other appropriations provided in the bill be subjected to the same voucher and auditing requirements that apply to the overwhelming majority of Federal expenditures.

LIMITATION ON VEHICLE USE

Once again the Committee is distressed by the disregard for the provisions of 31 USC 638(a) by many heads of agencies funded by this bill. Public disdain for the capriciousness of many of our elected and appointed officials has never been higher, and the Committee feels that the abuse of limitations on government vehicle usage by certain agency officials must come to a stop.

Notwithstanding the many clever, innovative interpretations of this law by agency counsels, the Committee feels that the intent of the limitation is crystal clear and inarguable. Title 31 USC 638(a) states unequivocally that the use of government vehicles for other than official purposes is prohibited and that the phrase "official purposes" is *not* to include the transportation of government officers and employees between their domiciles and their places of employment. The exceptions to this limitation are equally clear. The President and his Cabinet, medical doctors on out-patient duty, ambassadors, and those employees engaged in "field work" who live *far* from their headquarters are the *only* ones who can use government vehicles to transport themselves to and from work. The only agency chief covered by this exemption in this appropriation bill is the Secretary of the Department of House and Urban Development.

Although a number of the top officials of agencies under the appropriation blanket of this Committee have abandoned their chauffeured limousines for carpools and public transportation, four individuals still continue to disobey the law.

One agency chief stated bluntly in a recent hearing, "I do not feel defensive about using the car to go to and from my home, although it is illegal." This same individual went on to say that having the use of

a government vehicle to carry him to work and home at night is a "custom" and a "perquisite of office." He also went so far as to claim that his home was out of the mainstream of public transportation, thus making public transit out of the question. A quick check by the Committee staff showed that this Administrator lived within a few blocks of the most heavily traveled bus route in the entire city of Washington, and only about 4 miles from his office.

Another distinguished Administrator continues to disregard the law, claiming that being driven to and from his home in nearby McLean, Virginia, is justified because he is on "field work."

A third Administrator justified his being driven to and from home on the grounds that he was driven only 50 percent of the time and that he was not abusing the law as much as did his predecessor.

Finally, the Chairman of one of our Federal Corporations is driven to and from work by a chauffeur who made nearly \$19,000 in salary and overtime last year.

What we have here is the old case of the "everyone-else-does-it-so-why-shouldn't-I" syndrome that has led to a deepening of the credibility gap between the taxpayer, who foots the bill, and government officials, who are supposed to be representing the interests of the public. This wasteful expenditure of tax dollars on gasoline, vehicles, and chauffeurs who make up to \$19,000 per year, is not in the best interest of the American people. The Committee hopes to put an end to these violations of the law by adding a provision to the bill which in effect restates the existing law and restricts the use of government vehicles.

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

RESEARCH AND DEVELOPMENT

	Fiscal year	Transition period
1975 appropriation	\$2,331,015,000	-----
Estimate, 1976	2,678,380,000	\$730,600,000
House allowance	2,628,980,000	700,600,000
Committee recommendation	2,685,380,000	700,600,000

The Committee recommends an appropriation of \$2,685,380,000 for the Research and Development program of the National Aeronautics and Space Administration. This figure is \$7,000,000 over the budget estimate and \$56,400,000, over the House allowance. The Committee also recommends an appropriation of \$700,600,000 for the Transition period. This sum is \$30,000,000 under the budget estimate and the same as the amount contained in the House-passed bill.

\$72 million of the Research and Development appropriation was deferred in fiscal year 1975, with obligation to be made in fiscal year 1976. These funds, are planned for obligation early in the new fiscal year.

The National Aeronautics and Space Administration program of Research and Development is directed toward advancing our knowledge of earth and its space environment, as well as toward developing and utilizing aeronautics and space technology to accomplish national goals. The following activities are supported by the budget of the Research and Development activity:

Manned Space Flight.—A program to develop and utilize the capabilities of manned space flight, including an international cooperative space docking mission, building on the success of Apollo and Skylab, and development of the Space Shuttle as an economical, versatile space transportation system to provide a wide variety of users with routine, round trip access to space.

Space Science.—A space flight program, supported by extensive ground-based and airborne investigations, to further our knowledge of the earth, the atmosphere, the moon, the sun, the planets, interplanetary space, and the stars.

Applications.—A research and development program using space, aircraft, and ground systems to identify and demonstrate the useful applications of space techniques in such areas as weather and climate, pollution monitoring, earth resources survey, earth and ocean physics, communications, and space processing.

Aeronautics and Space Technology.—A program to acquire fundamental knowledge and develop the technology needed to maintain United States leadership in aeronautics and space programs.

Tracking and Data Acquisition.—A worldwide program to support the manned and unmanned programs of the agency.

Energy Technology Applications.—A program to assist in insuring the attainment and maintenance of national energy self-sufficiency, designed to identify aeronautics and space technologies of importance to the energy community.

Technology Utilization.—A program to accelerate the dissemination to government, industry and other users of the technological and engineering information gained during NASA missions.

The Committee has restored the \$48,400,000 contained in the budget but cut by the House for Pioneer Venus. Pioneer Venus is a two-spacecraft mission to Venus, scheduled for launch in 1978, with one spacecraft going into orbit about the planet to conduct long-term observations while the second spacecraft releases four probes to make detailed measurements in the atmosphere. A complement of instruments will return extensive scientific data on the atmosphere of Venus, much of which is expected to be applicable to the prediction of various dynamic phenomena in the Earth's atmosphere, including weather, climate changes, and certain atmospheric pollution effects.

The Pioneer Venus project was initiated under authorizations and appropriations approved for fiscal year 1975, having been deferred for two years because of budgetary constraints although NASA and its scientific advisors considered it the top priority next step in the exploration of the inner planets. It was budgeted for fiscal years 1975 and 1976 both because of its high scientific priority and because the 1978 launch opportunity is more favorable than the next opportunities in 1980 and later. Venus will be closer to the earth in 1978 and, therefore, less energy to reach it is required, and the spacecraft can therefore be designed to maximize the science return and take advantage of the economies possible with a lower energy mission. Deferring the Pioneer Venus mission to the 1980 opportunity would force NASA to start over again with a new spacecraft design with reduced weight and lesser scientific capabilities. It is estimated that a Pioneer-Venus launch in 1980 would cost at least \$50 million more than the program now planned.

The Committee has restored the \$1,000,000 cut by the House from the \$5,000,000 requested for continued studies of the Large Space Telescope. This will fund continued Large Space Telescope definition studies and advanced technological development required to define an optimum design at minimum cost. NASA does not intend to recommend development of the LST until the technical and scientific capabilities and cost options connected with this project are fully assessed.

The Congress recently passed legislation giving NASA the lead agency role for carrying out a program of research, technology, and monitoring for the purpose of understanding the physical and chemical processes of the upper atmosphere. For this program the Congress authorized to be appropriated \$14,000,000 for fiscal year 1976; \$7,000,000 more than contained in the NASA budget request and the House bill. To carry out the intent of the Congress the Committee has added an additional \$7 million making a total of \$14,000,000 available for the upper atmosphere research, technology and monitoring program, with special emphasis on the current questions that have been raised about the depletion of stratospheric ozone. Further, it is the intent of the Committee that this program be funded during the transition period at a level consistent with the fiscal year 1976 funding level.

Finally, by the time this report is published for the Members, the joint U.S.-U.S.S.R. Apollo-Soyuz Test Project will be history. Some of the Members of the Committee had reservations about the mission in terms of its potential safety hazards and high cost. The Committee feels that it should, in the future, as it has in the past, be notified well in advance of any future joint U.S.-U.S.S.R. space ventures so that an accurate assessment of the potential benefits and costs can be made.

CONSTRUCTION OF FACILITIES

	Fiscal year	Transition period
1975 appropriation -----	\$140,155,000	-----
Estimate, 1976 -----	84,620,000	\$14,500,000
House allowance -----	82,130,000	10,750,000
Committee recommendation -----	82,130,000	10,750,000

The Committee recommends an appropriation of \$82,130,000 for NASA's Construction of Facilities program. This total is \$2,490,000 under the budget estimate and the same as the amount contained in the House-passed bill. The Committee also recommends \$10,750,000 to fund this activity during the Transition period. This sum is \$3,750,000 under the budget request and the same as the House allowance.

This appropriation provides for contractual services for the design, major rehabilitation, and modification of facilities; the construction of new facilities; minor construction; the purchase of related equipment and advanced design related to facilities planned for future authorization.

The program for 1976, in many aspects, reflects a continuation of prior years' endeavors, especially in regard to:

- (a) Space shuttle facilities.
- (b) Facility rehabilitation and modification and minor construction programs.
- (c) Facility planning and design.

Space Shuttle Facilities.—The purpose of these projects is to modify and add to existing Government-owned facilities and to construct those limited new facilities necessary to support the space shuttle program. As in prior years, this shuttle facility package includes all major facility requirements which are unique to the space shuttle program. All requirements are tied to a shuttle program milestone or "need date". Included in this package are all facility requirements needed to achieve that initial operational capability or capacity as set forth in the project documentation and/or the outline assumptions on which total shuttle facility needs have been based and projected.

Rehabilitation and Modification of Facilities.—This program is intended to provide for the rehabilitation and modification of facilities at NASA field installations and Government-owned industrial plants engaged in NASA activities. Included in this project are those priority rehabilitation and modification facility needs for FY 1976 which can be foreseen at the time of the submission of these estimates, and which are estimated to cost not in excess of \$500,000 per project. The purpose of this program is to protect, preserve, and enhance the capabilities and usefulness of existing NASA facilities, and to insure the continued safe, economical, and efficient use of these physical plants. While, in the past, this particular program has been specifically directed toward the general nonprogrammatic segments of NASA facilities, this is the fourth year in which additional attention has been given to facility modification requirements generated by specific programs or projects.

Minor Construction Programs.—The purpose of this element of the Construction of Facilities program is to provide for minor facility construction at NASA field installations and at Government-owned industrial plants engaged in NASA activities. This provides for minor facility projects involving the construction of new facilities or additions to existing facilities, each project of which is estimated to be not in excess of \$250,000. Such minor construction is necessary in fiscal year 1976 to further improve the usefulness of NASA's physical plant by making it possible to accomplish needed adjustments in the utilization and augmentation of its capabilities.

Facility Planning and Design.—The funds requested in this estimate are required to provide for the following advance planning and design activities related to facilities activities and projects:

(a) The accomplishment of necessary development and master planning for field installations and, where not otherwise provided for, the updating of record drawings and the provision of engineering services.

(b) The preparation of preliminary engineering reports, cost estimates, and design and construction schedules.

(c) The preparation of final construction contract plans, specifications, and associated cost estimates and schedules that are required to implement construction projects.

(d) The accomplishment of facilities siting and other investigations, as well as the accomplishment of special facilities studies and reports.

The Committee agrees with the House action denying \$2,490,000 for an addition to the Lunar Sample Curatorial Facility at the Johnson Space Center. The agency itself acknowledges, in its response to the House bill, that the decrease of \$2,490,000 is consistent with the deferral of this project by the authorizing committees. The Committee also concurs with the House's reduction of the Transition Period budget for Construction of Facilities to the level contained in the authorization bill.

Finally, the Committee agrees that funding for modification of the 40x80 foot wind tunnel at the Ames Research Center be denied until the Committee has had an opportunity to review the necessary funding in a formal budget request.

RESEARCH AND PROGRAM MANAGEMENT

	<i>Fiscal year</i>	<i>Transition period</i>
1975 appropriation -----	\$759,975,000	-----
Estimate, 1976 -----	776,000,000	\$213,800,000
House allowance -----	775,512,000	213,678,000
Committee recommendation -----	775,512,000	213,678,000

For Research and Program Management, the Committee recommends an appropriation of \$775,512,000. This is \$488,000 under the budget estimate and the same as the amount provided for in the House bill.

The Research and Program Management appropriation funds research in Government laboratories, management of programs, and other agency activities. Principally, this appropriation provides for (1) the civil service staff needed to perform in-house research, and to plan, manage, and support the Research and Development programs; and (2) the other elements of operational capability of the laboratories and facilities such as utilities, logistics support (travel and transportation, maintenance, and operation of facilities), and technical and administrative support.

The in-house personnel funded by the Research and Program Management appropriation are engaged in research and technology, and direct and indirect support of project work. Over three-fourths of this appropriation is required to cover salaries and related costs of these employees. The balance, consisting of travel, facilities services, technical services, and administrative support of all NASA installations, provides the test and operational facilities support and related goods and services which make possible the efficient accomplishment of NASA's approved missions.

The reduction in funding below the budget estimates represents a ten percent cut in GSA rental charges.

The Committee held a special hearing to discuss NASA expenditure of funds in connection with the proposed relocation of the Naval Oceanographic Office to the National Space Technology Laboratories. The Committee has been assured by NASA that all funds expended by NASA in connection with this move and associated with the Naval presence and use of facilities at NSTL will be fully recovered by NASA and points out that any NASA subsidy of true costs connected with either the move or the occupancy by the Navy would be improper.

It is the Committee's intent that any NASA funds expended on structural modifications, capital equipment relocations, or personnel relocations at NSTL in connection with the Navy move be scheduled for complete recovery by NASA within a 3-year period from the time the Navy becomes a principal tenant at NSTL. It is the Committee's understanding that NASA will charge the Navy, in the form of annual rent, the full amount of operating costs associated with the Naval presence at NSTL. The Committee will expect a report from NASA within 9 months of the date of the signing of this bill into law listing all NASA expenditures made in connection with the relocation of the Naval Oceanographic Office, the schedule for recovery of these expenditures and the schedule of rents charged to the Navy reflecting the cost of maintaining the facilities occupied by the Naval activities and any other costs connected thereto.

COMPARATIVE STATEMENT OF THE NEW BUDGET (OBLIGATIONAL) AUTHORITY FOR FISCAL YEAR 1975 AND THE BUDGET ESTIMATES FOR FISCAL YEAR 1976

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, 1975 (2)	Budget estimates of new budget (obligational) authority, 1976 (3)	Increase (+) or decrease (-) (4)
National Aeronautics and Space Administration: Miscellaneous trust funds (indefinite).....	1,550,000	525,000	-1,025,000

COMPARATIVE STATEMENT OF NEW BUDGET (OBLIGATIONAL) AUTHORITY FOR FISCAL YEAR 1975 AND THE BUDGET ESTIMATES AND AMOUNTS RECOMMENDED IN THE BILL FOR FISCAL YEAR 1976 AND THE TRANSITION PERIOD

Agency and item (1)	New budget (obligational) authority fiscal year 1975 (2)	Budget estimates of new budget (obligational) authority fiscal year 1976 and transition period (3)	New budget (obligational) authority recommended in House bill (4)	Committee recommendation (5)	Increase (+) or decrease (-), Senate bill compared with—		
					Appropriations 1976 (6)	Estimates 1976 (7)	House bill (8)
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION							
Research and development.....	2,331,015,000	2,678,380,000	2,628,980,000	2,685,380,000	+354,365,000	+7,000,000	+56,400,000
Transition period.....		730,600,000	700,600,000	700,600,000		-30,000,000	
Construction of facilities.....	140,155,000	84,620,000	82,130,000	82,130,000	-58,025,000	-2,490,000	
Transition period.....		14,500,000	10,750,000	10,750,000		-3,750,000	
Research and program management.....	759,975,000	776,000,000	775,512,000	775,512,000	+15,587,000	-488,000	
Transition period.....		213,800,000	213,678,000	213,678,000		-122,000	
Total, National Aeronautics and Space Administration.....	3,231,145,000	3,589,000,000	3,496,622,000	3,543,622,000	+311,877,000	+4,022,000	+56,400,000
Transition period.....		958,900,000	925,028,000	925,028,000		-33,872,000	

MAKING APPROPRIATIONS FOR THE DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT, AND FOR SUNDRY INDEPENDENT EXECUTIVE AGENCIES FOR THE FISCAL YEAR ENDING JUNE 30, 1976, AND THE PERIOD ENDING SEPTEMBER 30, 1976

SEPTEMBER 23, 1975.—Ordered to be printed

Mr. BOLAND, from the committee of conference, submitted the following

CONFERENCE REPORT

[To accompany H.R. 8070]

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

Amendment No. 36: Appropriates \$2,677,380,000 for research and development, instead of \$2,628,980,000 as proposed by the House and \$2,685,380,000 as proposed by the Senate. The committee of conference is agreed that NASA may reprogram \$7,000,000 from within the total provided for research and development for an upper atmosphere research, technology and monitoring program. The committee of conference is also agreed that \$1,000,000 of the total funding of \$48,400,000 proposed for Pioneer-Venus may be reprogrammed for further planning of a Large Space Telescope in fiscal year 1976. Finally, the Committee is agreed that NASA may not obligate funds beyond evaluation of LST Phase B studies.

TITLE IV—GENERAL PROVISIONS

Amendment No. 55: Reported in technical disagreement. The managers on the part of the House will offer a motion to recede and concur in the amendment of the Senate with an amendment to permit the Secretary to increase travel restrictions as necessary to cover FHA inspection and appraisal workload requirements. The managers on the part of the Senate will move to concur in the amendment of the House to the amendment of the Senate.

Amendment No. 56: Reported in technical disagreement. The managers on the part of the House will offer a motion to restore language proposed by the House and stricken by the Senate to prohibit use of funds in this Act to administer any program to tax, limit, or other-

wise regulate parking or the review of indirect sources, amended to prohibit the use of funds in this Act by the Environmental Protection Agency to promulgate any program to tax, limit or otherwise regulate parking that is not specifically required pursuant to subsequent legislation. The managers on the part of the Senate will move to concur in the amendment of the House to the amendment of the Senate.

Amendment No. 57: Reported in technical disagreement. The managers on the part of the House will offer a motion to restore language proposed by the House and stricken by the Senate relating to certain noise control restrictions, amended to limit the application of such provision to Merced County, California. The managers on the part of the Senate will move to concur in the amendment of the House to the amendment of the Senate.

Amendment No. 58: Deletes language proposed by the Senate relating to any illegal usage of passenger motor vehicles. The committee of conference is deeply concerned over the continuing use of government vehicles and drivers to transport agency heads and others to and from work that may be in violation of the letter as well as the spirit of the law. In deleting the language of the Senate, the committee of conference does not in any way condone or accept any illegal use of government vehicles.

Amendment No. 59: Reported in technical disagreement. The managers on the part of the House will offer a motion to recede and concur in the amendment of the Senate to insert language requiring all funds provided in the bill to be subject to voucher and audit by the General Accounting Office.

CONFERENCE TOTAL—WITH COMPARISONS

The total new budget (obligational) authority for the fiscal year 1976 and the transition period recommended by the committee of conference, with comparisons to the fiscal year 1975 amounts, the 1976 budget estimates, and the House and Senate bills for 1976 follows:

New budget (obligational) authority, fiscal year 1975.....	\$26,498,814,000
Budget estimates of new (obligational) authority (as amended), fiscal year 1976.....	1 48,779,570,000
Transition period.....	5,672,703,000
House bill, fiscal year 1976.....	1 42,366,024,000
Transition period.....	5,434,617,000
Senate bill, fiscal year 1976.....	1 50,275,314,000
Transition period.....	5,647,448,000
Conference agreement.....	1 49,344,914,000
Transition period.....	5,648,675,000
Conference agreement compared with:	
New budget (obligational) authority, fiscal year 1975....	+22,846,100,000
Budget estimates of new (obligational) authority (as amended), fiscal year 1976.....	+565,344,000
Transition period.....	-24,023,000
House bill, fiscal year 1976.....	+6,978,890,000
Transition period.....	+214,058,000
Senate bill, fiscal year 1976.....	-930,400,000
Transition period.....	+1,227,000

¹ The conference agreement includes \$17,000,000,000 in new budget (obligational) authority for the annual contributions for assisted housing program, instead of \$28,063,000,000 as in the 1976 budget request and House report, and \$662,300,000 in the Senate report.



Public Law 94-116
94th Congress, H. R. 8070
October 17, 1975

An Act

Making appropriations for the Department of Housing and Urban Development, and for sundry independent executive agencies, boards, bureaus, commissions, corporations, and offices for the fiscal year ending June 30, 1976, and the period ending September 30, 1976, 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 the Department of Housing and Urban Development, and for sundry independent executive agencies, boards, bureaus, commissions, corporations, and offices for the fiscal year ending June 30, 1976, the period ending September 30, 1976, and for other purposes, namely:

Department of
Housing and
Urban Develop-
ment--Independ-
ent Agencies
Appropriation
Act, 1976.

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

RESEARCH AND DEVELOPMENT

For necessary expenses, not otherwise provided for, including research, development, operations, services, minor construction, maintenance, repair, rehabilitation and modification of real and personal property; tracking and data relay satellite services as authorized by law 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, \$2,677,380,000, to remain available until expended.

For "Research and development," to be available July 1, 1976, \$700,600,000, to remain available until expended.

CONSTRUCTION OF FACILITIES

For construction, rehabilitation and modification of facilities, minor construction of new facilities and additions to existing facilities, and for facility planning and design not otherwise provided, for the National Aeronautics and Space Administration, and for the acquisition or condemnation of real property, as authorized by law, \$82,130,000, to remain available for obligation until September 30, 1978; *Provided*, That, notwithstanding the limitation on the availability of funds appropriated under this head by this appropriation act, when any activity has been initiated by the incurrence of obligations therefor, the amount available for such activity shall remain available until expended, except that this provision shall not apply to the amounts appropriated pursuant to the authorization for rehabilitation and modification of facilities, minor construction of new facilities and additions to existing facilities, and facility planning and design.

For "Construction of facilities," to be available July 1, 1976, \$10,750,000, to remain available for obligation until September 30, 1979.

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 uniforms or allowances therefor, as authorized by law (5 U.S.C. 5901-5902); awards; purchase (not to exceed one, for replacement only of one or more existing aircraft, at least one of which shall be an administrative aircraft, which existing aircraft may be exchanged in part payment), hire, maintenance and operation of administrative aircraft; purchase (not to exceed ten for replacement only) and hire of passenger motor vehicles; and maintenance and repair of real and personal property, and not in excess of \$25,000 per project for construction of new facilities and additions to existing facilities, and not in excess of \$50,000 per project for rehabilitation and modification of facilities; \$775,512,000: *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: *Provided further*, That not to exceed \$35,000 of the foregoing amount 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.

For "Research and program management," for the period July 1, 1976, through September 30, 1976, \$213,678,000.

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 ten per centum above 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 interagency motor pools where separately set forth in the budget schedules: *Provided further*, That the limitation may be increased by the Secretary when necessary to allow for travel performed by employees of the Department of Housing and Urban Development as a result of increased Federal Housing Administration inspection and appraisal workload.

SEC. 402. Appropriations and funds available for the administrative expenses of the Department of Housing and Urban Development and the Selective Service System 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. 3109.

SEC. 403. 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, Government National Mortgage Association, Federal Home Loan Mortgage Corporation, Federal Financing Bank, 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. 1811-1831).

SEC. 404. 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. 405. No part of any appropriation, funds, or other authority contained in this Act shall be available for paying to the Administrator of the General Services Administration in excess of 90 per centum of the standard level user charge established pursuant to section 210(j) of the Federal Property and Administrative Services Act of 1949, as amended, for space and services.

SEC. 406. No part of any appropriation contained in this Act shall remain available for obligation beyond the current fiscal year unless expressly so provided herein, except as provided in Section 204 of the Supplemental Appropriation Act, 1975 (P.L. 93-554).

SEC. 407. No part of the funds appropriated under this Act may be used by the Environmental Protection Agency to administer or promulgate, directly or indirectly, any program to tax, limit or otherwise regulate parking that is not specifically required pursuant to subsequent legislation.

SEC. 408. None of the funds provided by this Act shall be used to deny or fail to act upon, on the basis of noise contours set forth in an Air Installation Compatible Use Zone Map, an otherwise acceptable application for Federal Housing Administration mortgage insurance in connection with construction in an area zoned for residential use in Merced County, California.

SEC. 409. No funds appropriated by this Act may be expended—

(1) pursuant to a certification of an officer or employee of the United States unless—

(A) such certification is accompanied by, or is part of, a voucher or abstract which describes the payee or payees and the items or services for which such expenditure is being made, or

(B) the expenditure of funds pursuant to such certification, and without such a voucher or abstract, is specifically authorized by law; and

(2) unless such expenditure is subject to audit by the General Accounting Office or is specifically exempt by law from such an audit.

This Act may be cited as the "Department of Housing and Urban Development—Independent Agencies Appropriation Act, 1976".

Approved October 17, 1975.

LEGISLATIVE HISTORY:

HOUSE REPORTS: No. 94-313 (Comm. on Appropriations) and No. 94-502 (Comm. of Conference).

SENATE REPORT No. 94-326 (Comm. on Appropriations).

CONGRESSIONAL RECORD, Vol 121 (1975):

June 24, considered and passed House.

July 26, considered and passed Senate, amended.

Oct. 3, House agreed to conference report; concurred in Senate amendments with amendments; Senate agreed to conference report; concurred in House amendments.

89 STAT. 601

AUTHORIZATION BILLHOUSE (HR 2931) (Superseded by 4700)FIELD HEARINGS

2/7/75 Ames Research Center - Mr. Foster, Dr. Colin, Mr. Page, Dr. Mark, Dr. Chapman, Dr. Sharp, Dr. Sandler

2/7/75 Lockheed Missles & Space Co., Inc. -

2/10/75 Jet Propulsion Laboratory - Dr. Pickering, Mr. Gibberson, Mr. Parks, Mr. Felberg, Mr. Sample

2/10/75 Rockwell International, Space Division -

2/10/75 Rockwell International, Rocketdyne Division -

2/11/75 Martin Marietta -

2/21/75 Langley Research Center - Mr. Love, Dr. Michael, Dr. Cortright, Mr. English, Mr. Van Ness, Dr. Lawrence, Mr. Holloway, Mr. Llewellyn, Dr. Soffen, Mr. Guastafarro, Mr. Broome, Mr. Schade, Mr. Morello, Mr. Stickle, Mr. Bower, Mr. Nagel, Mr. Wells, Mr. Heldenfels, Mr. Reed, Dr. Whitcomb, Mr. Morgan

2/24/75 Lewis Research Center - Mr. Lundin, Mr. Himmel, Mr. Stofan, Mr. Mosher, Mr. Mottl, Mr. Robbins, Mr. Shramo, Mr. Douglas, Mr. Davidson, Mr. Ault, Dr. Rosenblum

SUBCOMMITTEE ON AVIATION AND TRANSPORTATION R&D

2/5/75 Dr. Lovelace, Dr. Cortright

2/18/75 Mr. J. L. Jones, Dr. Lovelace, Mr. Johnson, Mr. Evans, Mr. Hodge, Mr. Enders, Mr. Olcott, Mr. Winblade

2/19/75 Mr. Aiken, Dr. Lovelace, Dr. Orloff, Mr. J. L. Jones

3/7/75 STAFF BRIEFING - Dr. Lovelace, Mr. Jones, Mr. Madden

SUBCOMMITTEE ON SPACE SCIENCE AND APPLICATIONS

2/4/75 Dr. Fletcher, Dr. Low, Mr. Hankins, Dr. Cortright, Dr. Schmitt, Mr. Lilly, Dr. Petrone, Dr. Lovelace

2/5/75 Mr. Mathews, Mr. Williams, Dr. Tepper

2/17/75 Mr. Schweickart, Mr. Mathews, Mr. Sedlazeck

2/18/75 Dr. Hinners, Dr. Schardt, Mr. Thole, Mr. Daniels, Mr. Kraemer, Mr. Mahon

2/19/75 Mr. Yardley, Dr. Malkin, Dr. King, Captain Lee

2/20/75 Mr. Culbertson, Dr. Winter, Mr. Schneider, Mr. Yardley, Dr. Kraft, Mr. Disher, Mr. Lord, Dr. Johnston, Mr. Stoewer

2/25/75 Dr. Schmitt, Mr. Ginter, Mr. Gray, Mr. Hamilton, Mr. Penaranda, Mr. Smylie, Mr. Masica, Mr. Truszynski, Dr. Lovelace, Mr. Schinnick

2/26/75 Gen. Curtin, Mr. Groo, Mr. Malaga, Mr. Hosenball, Mr. Mossinghoff

2/27/75 Mr. Lilly

4/9/75 House Floor Action

CHRONOLOGY OF EVENTS

AUTHORIZATION BILLSENATE (S 573) (Superseded by HR 4700)CONFERENCE COMMITTEE ACTION

2/6/75 Dr. Fletcher, Dr. Low, Mr. Lilly, Dr. Schmitt,
Mr. Jones, Mr. Mathews, Gen. Stafford, Dr. Petrone

2/18/75 Dr. Fletcher, Mr. Yardley, Dr. Malkin, Mr. Lilly

2/19/75 Dr. Fletcher, Dr. Hanners, Mr. Truszynski,
Mr. Gray, Mr. Thole, Mr. Lilly

3/3/75 Mr. Mathews, Dr. Marsten, Dr. Fletcher, Dr. Schmitt,
Mr. Ginter, Mr. Bostick, Mr. Copps, Gen. Curtin,
Mr. Groo, Mr. Lilly

3/11/75 Dr. Lovelace, Mr. Smylie, Mr. Johnson

3/18/75 Mr. Yardley, Mr. Stoewer

3/19/75 Dr. Hanners, Mr. Truszynski

5/12/75 Senate Floor Action

6/4/75 Conference Committee Report No. 94-259

6/9/75 House Approved Conference Report

6/10/75 Senate Approved Conference Report

6/19/75 President approved Public Law 94-39

APPROPRIATION BILLHOUSE (HR 8070)

3/4/75 Dr. Fletcher, Dr. Low, Mr. Lilly, Mr. Yardley,
Dr. Hinners, Mr. Mathews, Mr. Shapley,
Dr. Petrone, Dr. Schmitt

3/5/75 Dr. Fletcher, Dr. Low, Dr. Petrone, Mr. Lilly,
Mr. Yardley, Dr. Hinners, Mr. Mathews,
Mr. Truszynski, Dr. Lovelace, Dr. Schmitt, Mr. Gray

3/6/75 Dr. Fletcher, Dr. Low, Gen. Curtin, Mr. Lilly,
Mr. Truszynski, Mr. Yardley, Dr. Schmitt,
Dr. Lovelace, Mr. Groo, Mr. Malaga

6/19/75 Appropriation Committee Report No. 94-313

6/24/75 House Floor Action

SENATE (HR 8070)

3/10/75 Dr. Fletcher, Dr. Low, Mr. Lilly,
Dr. Lovelace, Mr. Mathews

3/11/75 Dr. Fletcher, Mr. Lilly, Mr. Yardley,
Dr. Low, Mr. Mathews, Gen. Curtin,
Dr. Schmitt, Dr. Jenkins, Mr. Hosenball

7/24/75 Appropriation Committee Report No. 94-326

7/26/75 Senate Floor Action

CONFERENCE COMMITTEE ACTION

9/23/75 Conference Committee Report No. 94-502

10/3/75 House Approved Conference Report

10/3/75 Senate Approved Conference Report

10/17/75 President Approved P.L. 94-116



Public Law 94-303
94th Congress, H. R. 13172
June 1, 1976

An Act

Making supplemental appropriations for the fiscal year ending June 30, 1976, and the period ending September 30, 1976, 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 to supply supplemental appropriations (this Act may be cited as the "Second Supplemental Appropriations Act, 1976") for the fiscal year ending June 30, 1976, and the period ending September 30, 1976, and for other purposes, namely:

TITLE II—INCREASED PAY COSTS FOR THE FISCAL YEAR 1976

For additional amounts for appropriations for the fiscal year 1976, for increased pay costs authorized by or pursuant to law, as follows:

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

"Research and program management", \$16,800,000;

TITLE III—INCREASED PAY COSTS FOR THE PERIOD JULY 1, 1976, THROUGH SEPTEMBER 30, 1976

For additional amounts for appropriations for the period July 1, 1976, through September 30, 1976, for increased pay costs authorized by or pursuant to law, as follows:

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

"Research and program management", \$7,117,000;

Second Supplemental Appropriations Act, 1976.

TITLE IV GENERAL PROVISIONS

Sec. 401. No part of any appropriation contained in this Act shall remain available for obligation beyond the current fiscal year unless expressly so provided herein, except as provided in section 204 of the Supplemental Appropriation Act, 1975 (P.L. 93-554).

Sec. 402. Except where specifically increased or decreased elsewhere in this Act, the restrictions contained within appropriations, or provisions affecting appropriations or other funds, available during the fiscal year 1976 and the period July 1, 1976, through September 30, 1976, limiting the amounts which may be expended for personal services, or for purposes involving personal services, or amounts which may be transferred between appropriations or authorizations available for or involving such services, are hereby increased to the extent necessary to meet increased pay costs authorized by or pursuant to law.

Sec. 403. No part of any appropriation, funds, or other authority contained in this Act shall be available for paying to the Administrator of the General Services Administration in excess of 90 per centum of the standard level user charge established pursuant to section 210(j) of the Federal Property and Administrative Services Act of 1949, as amended, for space and services.

Sec. 404. None of the funds appropriated by this Act or previous Acts shall be used to further fund the Study of Effect of Marihuana on Human Sexual Response at Southern Illinois University.

Sec. 405. Section 307 of the Education Division and Related Agencies Appropriation Act, 1976 (Public Law 94-94) is hereby repealed.

Sec. 406. None of the funds appropriated by this Act or any other Act shall be paid to the Peoples Bicentennial Commission or used to support such Commission either directly or indirectly.

Approved June 1, 1976.

Fiscal year limitation.

88 Stat. 1784.

40 USC 490.

Repeal.
89 Stat. 473.

LEGISLATIVE HISTORY:

HOUSE REPORTS: No. 94-1027 (Comm. on Appropriations) and No. 94-1133 (Comm. of Conference).

SENATE REPORT No. 94-802.

CONGRESSIONAL RECORD, Vol. 122 (1976):

Apr. 13, considered and passed House.

May 10-12, considered and passed Senate, amended.

May 18, House agreed to conference report; receded and concurred in certain Senate amendments; receded and concurred in certain Senate amendments with amendments.

May 19, Senate agreed to conference report, concurred in House amendments.

WEEKLY COMPILATION OF PRESIDENTIAL DOCUMENTS, Vol. 12, No. 23:
June 1, Presidential statement.