In the Senate of the United States, November 5, 1999.

Resolved, That the bill from the House of Representatives (H.R. 1654) entitled "An Act to authorize appropriations for the National Aeronautics and Space Administration for fiscal years 2000, 2001, and 2002, and for other purposes.", do pass with the following

AMENDMENT:

Strike out all after the enacting clause and insert:

1 SECTION 1. SHORT TITLE; TABLE OF CONTENTS.

- 2 (a) SHORT TITLE.—This Act may be cited as the "Na-
- 3 tional Aeronautics and Space Administration Authoriza-
- 4 tion Act for Fiscal Years 2000, 2001, and 2002".

5 (b) TABLE OF CONTENTS.—

Sec. 1. Short title; table of contents. Sec. 2. Findings. Sec. 3. Definitions.

TITLE I—AUTHORIZATION OF APPROPRIATIONS

$Subtitle \ A - Authorizations$

Sec. 101. International Space Station.
Sec. 102. Launch Vehicle and Payload Operations.
Sec. 103. Science, aeronautics, and technology.
Sec. 104. Mission support.

- Sec. 105. Inspector General.
- Sec. 106. Experimental Program to Stimulate Competitive Research.

Subtitle B—Limitations and Special Authority

- Sec. 111. Use of funds for construction.
- Sec. 112. Availability of appropriated amounts.
- Sec. 113. Reprogramming for construction of facilities.
- Sec. 114. Consideration by committees.
- Sec. 115. Use of funds for scientific consultations or extraordinary expenses.

TITLE II—INTERNATIONAL SPACE STATION

- Sec. 201. International Space Station contingency plan.
- Sec. 202. Cost limitation for the International Space Station.
- Sec. 203. Liability cross-waivers for International Space Station-related activities.

TITLE III—MISCELLANEOUS PROVISIONS

- Sec. 301. National Aeronautics and Space Act of 1958 amendments.
- Sec. 302. Use of existing facilities.
- Sec. 303. Authority to reduce or suspend contract payments based on substantial evidence of fraud.
- Sec. 304. Notice.
- Sec. 305. Sense of Congress on the year 2000 problem.
- Sec. 306. Unitary Wind Tunnel Plan Act of 1949 amendments.
- Sec. 307. Enhancement of science and mathematics programs.
- Sec. 308. Authority to vest title.
- Sec. 309. NASA mid-range procurement test program.
- Sec. 310. Space advertising.
- Sec. 311. Authority to license NASA-developed software.
- Sec. 312. Carbon cycle remote sensing technology.
- Sec. 313. Indemnification and insurance.

1 SEC. 2. FINDINGS.

2 Congress makes the following findings:

3 (1) The National Aeronautics and Space Admin-4 istration should continue to pursue actions and re-5 forms directed at reducing institutional costs, including management restructuring, facility consolidation, 6 7 procurement reform, personnel base downsizing, and convergence with other defense and commercial sector 8 9 systems, while sustaining safety standards for personnel and hardware. 10

3

1 (2) The National Aeronautics and Space Admin-2 istration should sustain its proud history as the leader of the United States in basic aeronautics and space 3 4 research.

(3) The United States is on the verge of creating 5 6 and using new technologies in microsatellites, information processing, and space launches that could 7 8 radically alter the manner in which the Federal Gov-9 ernment approaches its space mission.

10 (4) The Federal Government should invest in the 11 types of research and innovative technology in which 12 United States commercial providers do not invest, 13 while avoiding competition with the activities in 14 which United States commercial providers do invest.

15 (5) International cooperation in space explo-16 ration and science activities serves the interest of the 17 United States.

18 (6) In participating in the National Aero-19 nautical Test Alliance, the National Aeronautics and 20 Space Administration and the Department of Defense 21 should cooperate more effectively in leveraging the 22 mutual capabilities of these agencies to conduct joint 23 aeronautics and space missions that not only improve 24 United States aeronautics and space capabilities, but 25 also reduce the cost of conducting those missions.

1 SEC. 3. DEFINITIONS.

2 In this Act:

3	(1) Administrator.—The term "Adminis-
4	trator" means the Administrator of the National Aer-
5	onautics and Space Administration.
6	(2) Commercial provider.—The term "com-
7	mercial provider" means any person providing space
8	transportation services or other space-related activi-
9	ties, the primary control of which is held by persons
10	other than a Federal, State, local, or foreign govern-
11	ment.
12	(3) CRITICAL PATH.—The term "critical path"
13	means the sequence of events of a schedule of events
14	under which a delay in any event causes a delay in
15	the overall schedule.
16	(4) GRANT AGREEMENT.—The term "grant
17	agreement" has the meaning given that term in sec-
18	tion 6302(2) of title 31, United States Code.
19	(5) INSTITUTION OF HIGHER EDUCATION.—The
20	term "institution of higher education" has the mean-
21	ing given such term in section 1201(a) of the Higher
22	Education Act of 1965 (20 U.S.C. 1141(a)).
23	(6) Major reorganization.—With respect to
24	the National Aeronautics and Space Administration,
25	the term "major reorganization" means any reorga-
26	nization of the Administration that involves the reas-
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1	signment of more than 25 percent of the employees of
2	the National Aeronautics and Space Administration.
3	(7) STATE.—The term "State" means each of the
4	several States of the United States, the District of Co-
5	lumbia, the Commonwealth of Puerto Rico, the Virgin
6	Islands, Guam, American Samoa, the Commonwealth
7	of the Northern Mariana Islands, and any other com-
8	monwealth, territory, or possession of the United
9	States.
10	TITLE I—AUTHORIZATION OF
11	APPROPRIATIONS
12	Subtitle A—Authorizations
13	SEC. 101. INTERNATIONAL SPACE STATION.
14	There are authorized to be appropriated to the Na-
15	tional Aeronautics and Space Administration for the Inter-
16	national Space Station—
17	(1) \$2,282,700,000 for fiscal year 2000;
18	(2) \$2,328,000,000 for fiscal year 2001; and
19	(3) \$2,091,000,000 for fiscal year 2002.
20	SEC. 102. LAUNCH VEHICLE AND PAYLOAD OPERATIONS.
21	There are authorized to be appropriated to National
22	Aeronautics and Space Administration for Launch Vehicle
23	and Payload Operations—
24	

1	(A) \$2,547,400,000 for space shuttle oper-
2	ations;
3	(B) $$463,800,000$ for space shuttle safety
4	and performance upgrades; and
5	(C) \$169,100,000 for payload and utiliza-
6	tion operations.
7	(2) for fiscal year 2001—
8	(A) \$2,623,822,000 for space shuttle oper-
9	ations;
10	(B) $$481,964,000$ for space shuttle safety
11	and performance upgrades; and
12	(C) \$174,173,000 for payload and utiliza-
13	tion operations.
14	(3) for fiscal year 2002—
15	(A) \$2,702,537,000 for space shuttle oper-
16	ations;
17	(B) $$505,523,000$ for space shuttle safety/
18	performance upgrades; and
19	(C) \$179,398,000 for payload and utiliza-
20	tion operations.
21	SEC. 103. SCIENCE, AERONAUTICS, AND TECHNOLOGY.
22	There are authorized to be appropriated to the Na-
23	tional Aeronautics and Space Administration for Science,
24	Aeronautics, and Technology—
25	(1) for fiscal year 2000—

1	(A) \$2,196,600,000 for Space Science;
2	(B) $$256,200,000$ for life and microgravity
3	sciences and applications, of which \$2,000,000
4	shall be for research and early detection system
5	for breast and ovarian cancer and other women's
6	health issues, and \$2,000,000 shall be made
7	available for immediate clinical trials of islet
8	transplantation in patients with Type I diabetes
9	utilizing immunoisolation technologies derived
10	from NASA space flights;
11	(C) \$1,459,100,000 for Earth Science;
12	(D) \$1,156,500,000 for aeronautics and
13	space transportation technology, of which—
14	(i) \$770,000,000 shall be used for aero-
15	nautical research and technology, of which
16	at least \$60,000,000 shall be used for the
17	Aviation Safety Program, and of which
18	\$25,000,000 shall be used to augment re-
19	search and technology relating to reduction
20	in aircraft noise consistent with a noise re-
21	duction goal of 10dB by 2007, and of which
22	\$50,000,000 shall be used for ultra-efficient
23	engine technology;
24	(<i>ii</i>) \$254,000,000 shall be used for ad-
25	vanced space transportation technology, of

	0
1	which \$111,600,000 shall be used only for
2	the X-33 advanced technology demonstra-
3	tion vehicle program; and
4	(iii) \$132,500,000 shall be used for
5	commercial technology, of which some funds
6	may be used for the expansion of the NASA
7	business incubation program which is de-
8	signed to foster partnerships between edu-
9	cational institutions and small high-tech-
10	nology businesses with preference given to
11	those programs associated with community
12	colleges;
13	(E) $$406,300,000$ for mission communica-
14	tions services;
15	(F) $$130,000,000$ for academic programs, of
16	which \$46,000,000 shall be used for minority
17	university research and education (at institu-
18	tions such as Hispanic-serving institutions and
19	tribally-controlled community colleges), of which
20	\$28,000,000 shall be used for historically black
21	colleges and universities; and
22	(G) $$150,000,000$ for future planning (space
23	launch).
24	(2) for fiscal year 2001—
25	(A) \$2.26.400.000 C (A) (A)

25 (A) \$2,262,498,000 for Space Science;

1	(B) $$263,886,000$ for life and microgravity
2	sciences and applications, and appropriate fund-
3	ing shall be made available for continuing clin-
4	ical trials of islet transplantation in patients
5	with Type I diabetes utilizing immunoisolation
6	technologies derived from NASA space flights;
7	(C) \$1,502,873,000 for Earth Science;
8	(D) \$1,036,695,000 for aeronautics and
9	space transportation technology, of which
10	\$820,000,000 shall be used for aeronautical re-
11	search and technology, of which—
12	(i) at least \$60,000,000 shall be used
13	for the Aviation Safety program;
14	(ii) \$25,000,000 shall be used to aug-
15	ment research and technology relating to re-
16	duction in aircraft noise consistent with a
17	noise reduction goal of 10dB by 2007;
18	(iii) \$75,000,000 shall be used to aug-
19	ment research and technology for engine
20	and airframe efficiency and emissions re-
21	duction; and
22	(iv) \$50,000,000 shall be used for
23	ultra-efficient engine technology;
24	(E) $$418,489,000$ for mission communica-
25	tions services;

1	(F) \$133,900,000 for academic programs;
2	and
3	(G) \$150,000,000 for future planning (space
4	launch).
5	(3) for fiscal year 2002—
6	(A) \$2,330,373,000 for Space Science;
7	(B) \$271,803,000 for life and microgravity
8	sciences and applications, and appropriate fund-
9	ing shall be made available for continuing clin-
10	ical trials of islet transplantation in patients
11	with Type I diabetes utilizing immunoisolation
12	technologies derived from NASA space flights;
13	(C) \$1,547,959,000 for Earth Science;
14	(D) \$1,067,796,000 for aeronautics and
15	space transportation technology, of which
16	\$880,000,000 shall be used for aeronautical re-
17	search and technology, of which—
18	(i) at least \$60,000,000 shall be used
19	for the Aviation Safety program;
20	(<i>ii</i>) \$25,000,000 shall be used to aug-
21	ment research and technology relating to re-
22	duction in aircraft noise consistent with a
23	noise reduction goal of $10dB$ by 2007;
24	(iii) \$75,000,000 shall be used to aug-
25	ment research and technology for engine

1	and airframe efficiency and emissions re-
2	duction; and
3	(iv) \$50,000,000 shall be used for
4	ultra-efficient engine technology;
5	(E) $$431,044,000$ for mission communica-
6	tions services;
7	(F) $$137,917,000$ for academic programs;
8	and
9	(G) \$280,000,000 for future planning (space
10	launch).
11	SEC. 104. MISSION SUPPORT.
12	There are authorized to be appropriated to the Na-
13	tional Aeronautics and Space Administration for mission
14	support—
15	(1) for fiscal year 2000—
16	(A) $$43,000,000$ for safety, mission assur-
17	ance, engineering, and advanced concepts;
18	(B) $$89,700,000$ for space communication
19	services;
20	(C) $$181,000,000$ for construction of facili-
21	ties, including land acquisition; and
22	(D) \$2,181,200,000 for research and pro-
23	gram management, including personnel and re-
24	lated costs, travel, and research operations sup-
25	port.

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1	(2) \$2,569,747,000 for fiscal year 2001.
2	(3) \$2,646,839,000 for fiscal year 2002.
3	SEC. 105. INSPECTOR GENERAL.
4	There are authorized to be appropriated to the Na-
5	tional Aeronautics and Space Administration for Inspector
6	General—
7	(1) \$20,800,000 for fiscal year 2000;
8	(2) \$21,424,000 for fiscal year 2001; and
9	(3) \$22,066,720 for fiscal year 2002.
10	SEC. 106. EXPERIMENTAL PROGRAM TO STIMULATE COM-
11	PETITIVE RESEARCH.
12	Of the amounts authorized to be appropriated for aca-
13	demic programs under section $103(1)(F)$, $103(2)(F)$, and
14	103(3)(F), respectively, the Administrator shall use, for the
15	program known as the Experimental Program to Stimulate
16	Competitive Research—
17	(1) \$10,000,000 for fiscal year 2000;
18	(2) \$15,000,000 for fiscal year 2001; and
19	(3) \$20,000,000 for fiscal year 2002.
20	Subtitle B—Limitations and
21	Special Authority
22	SEC. 111. USE OF FUNDS FOR CONSTRUCTION.
23	(a) AUTHORIZED USES.—Funds made available by
24	appropriations under section 101, paragraphs (1)(A),
25	(1)(B), (2)(A), (2)(B), (3)(A), and (3)(B) of section 102,

section 103, and paragraphs (1)(A), (1)(B), (2)(A), and
 (2)(B) of section 104 and funds made available by appro priations for research operations support pursuant to sec tion 104 may, at any location in support of the purposes
 for which such funds are appropriated, be used for—

6 (1) the construction of new facilities; and
7 (2) additions to, repair of, rehabilitation of, or
8 modification of existing facilities (in existence on the
9 date on which such funds are made available by ap10 propriation).

11 (b) LIMITATION.—

(1) IN GENERAL.—Until the date specified in
paragraph (2), no funds may be expended pursuant
to subsection (a) for a project, with respect to which
the estimated cost to the National Aeronautics and
Space Administration, including collateral equipment, exceeds \$1,000,000.

18 (2) DATE.—The date specified in this paragraph 19 is the date that is 30 days after the Administrator no-20 tifies the Committee on Commerce, Science, and 21 Transportation of the Senate and the Committee on 22 Science of the House of Representatives of the nature, location, and estimated cost to the National Aero-23 24 nautics and Space Administration of the project re-25 ferred to in paragraph (1).

1 (c) TITLE TO FACILITIES.—

(1) IN GENERAL.—If funds are used pursuant to
subsection (a) for grants for the purchase or construction of additional research facilities to institutions of
higher education, or to nonprofit organizations whose
primary purpose is the conduct of scientific research,
title to these facilities shall be vested in the United
States.

9 (2) EXCEPTION.—If the Administrator deter-10 mines that the national program of aeronautical and 11 space activities will best be served by vesting title to 12 a facility referred to in paragraph (1) in an institu-13 tion or organization referred to in that paragraph, 14 the title to that facility shall vest in that institution 15 or organization.

16 (3) CONDITION.—Each grant referred to in para17 graph (1) shall be made under such conditions as the
18 Administrator determines to be necessary to ensure
19 that the United States will receive benefits from the
20 grant that are adequate to justify the making of the
21 grant.

22 SEC. 112. AVAILABILITY OF APPROPRIATED AMOUNTS.

To the extent provided in appropriations Acts, appropriations authorized under subtitle A may remain available
without fiscal year limitation.

1SEC. 113. REPROGRAMMING FOR CONSTRUCTION OF FA-2CILITIES.

3 (a) USE OF CONSTRUCTION FUNDS.—Subject to sub4 section (b), in addition to the amounts authorized for con5 struction of facilities under section 101(4) or section 103(3),
6 the Administrator may, for that purpose, from funds other7 wise available to the Administrator—

8 (1) use an additional amount equal to 10 per9 cent of the amount specified; or

10 (2) to meet unusual cost variations, use an addi-11 tional amount equal to 25 percent of that amount, 12 after the termination of a 30-day period beginning on 13 the date on which the Administrator submits a report 14 on the circumstances of such action by the Adminis-15 trator to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on 16 17 Science of the House of Representatives.

(b) LIMITATION.—The aggregate amount authorized to
be appropriated for construction of facilities under section
101(4) and section 103(3) shall not be increased as a result
of any action taken by the Administrator under paragraph
(1) or (2).

23 SEC. 114. CONSIDERATION BY COMMITTEES.

24 (a) IN GENERAL.—

25 (1) LIMITATION ON USE OF FUNDS.—Except as
26 provided in subsection (b), notwithstanding any other
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1	provision of law, no amount made available by ap-
2	propriations for the National Aeronautics and Space
3	Administration in excess of the amount authorized for
4	that program under this title may be used for any
5	program with respect to which—
6	(A) the annual budget request submitted by
7	the President under section 1105(a) of title 31,
8	United States Code, included a request for fund-
9	ing; and
10	(B) for the fiscal year of the request referred
11	to in subparagraph (A), Congress denied or did
12	not provide funding.
13	(2) PROHIBITION.—Notwithstanding any other
14	provision of law, no amount made available by ap-
15	propriations to the National Aeronautics and Space
16	Administration may be used for any program that is
17	not authorized under this Act, except for projects for
18	construction of facilities.
19	(b) EXCEPTION.—Funds may be used for a program
20	of the National Aeronautics and Space Administration
21	upon the expiration of the 30-day period beginning on the
22	date on which the Administrator provides a notice to the
23	Committee on Commerce, Science, and Transportation of
24	the Senate and the Committee on Science of the House of
25	Representatives that contains—

1 (1) a full and complete statement of the action 2 proposed to be taken by the Administrator with re-3 spect to that program; and 4 (2) the facts and circumstances that the Administrator relied on to support the proposed action re-5 6 ferred to in paragraph (1). 7 (c) INFORMATION.—The Administrator shall keep the 8 Committee on Commerce, Science, and Transportation of 9 the Senate and the Committee on Science of the House of 10 Representatives fully and currently informed with respect to all activities and responsibilities of the National Aero-11 nautics and Space Administration within the jurisdiction 12 of those committees. 13 14 SEC. 115. USE OF FUNDS FOR SCIENTIFIC CONSULTATIONS 15 OR EXTRAORDINARY EXPENSES. 16 Not more than \$35,000 of the amounts made available by appropriations pursuant to section 103 may be used by 17 the Administrator for scientific consultations or extraor-18 19 dinary expenses. TITLE II—INTERNATIONAL 20 SPACE STATION 21 22 SEC. 201. INTERNATIONAL SPACE STATION CONTINGENCY 23 PLAN. 24 (a)TRANSFER OF FUNDS TO RUSSIA.—Notwith-25 standing any other provision of this Act, no funds or inkind payments shall be transferred to any entity of the Rus sian Government or any Russian contractor to perform
 work on the International Space Station which the Russian
 Government pledged, at any time, to provide at its expense.
 This subsection shall not apply to the purchase or modifica tion of—

7 (1) the Russian Service Module, United States
8 owned Functional Cargo Block, Russian space launch
9 vehicles and launch services; or

10 (2) until the assembly of the United States lab
11 module, command and control capability.

(b) CONTINGENCY PLAN FOR RUSSIAN ELEMENTS IN
CRITICAL PATH.—The Administrator shall develop and deliver to Congress, within 60 days of enactment, a contingency plan for the removal or replacement of each Russian
Government element of the International Space Station
that lies in the Station's critical path, as well as Russian
space launch services. Such plan shall include—

(1) decision points for removing or replacing
those elements and launch services, to the maximum
extent feasible, necessary for completion of the International Space Station;

23 (2) the estimated cost of implementing each such
24 decision; and

1	(3) the cost, to the extent determinable, of remov-
2	ing or replacing a Russian Government critical path
3	element or launch service after its decision point has
4	passed, if—
5	(A) the decision at that point was not to re-
6	move or replace the Russian Government element
7	or launch service; and
8	(B) the National Aeronautics and Space
9	Administration later determines that the Rus-
10	sian Government will be unable to provide the
11	critical path element or launch service in a man-
12	ner to allow completion of the International
13	Space Station.
14	(c) Bimonthly Reporting on Russian Status.—
15	On or before December 1, 1999, and until substantial com-
16	pletion (as defined in section 202(b)(3) of this Act) of the
17	assembly of the International Space Station, the Adminis-
18	trator shall report to Congress on the first day of every other
19	month whether or not the Russians have performed work
20	expected of them and necessary to complete the Inter-
21	national Space Station. Such report shall also include a
22	statement of the Administrator's judgment concerning Rus-
23	sia's ability to perform work anticipated and required to
24	complete the International Space Station before the next re-
25	port under this subsection.

1 (d) Decision on Russian Critical Path Items.— 2 The President shall notify Congress within 90 days of enact-3 ment of this Act of the decision on whether or not to proceed 4 with permanent replacement of the Russian Service Module, other Russian elements in the critical path of the Inter-5 national Space Station, or Russian launch services. Such 6 7 notification shall include the reasons and justifications for 8 the decision and the costs associated with the decision. Such 9 decision shall include a judgment of when the assembly of 10 the International Space Station will be completed. If the President decides to proceed with a permanent replacement 11 for the Russian Service Module or any other Russian ele-12 ment in the critical path or Russian launch service, the 13 President shall notify Congress of the reasons and the jus-14 15 tification for the decision to proceed with the permanent replacement, and the costs associated with the decision. 16

17 SEC. 202. COST LIMITATION FOR THE INTERNATIONAL
18 SPACE STATION

(a) LIMITATION OF COSTS.—Except as provided in
subsection (c), the total amount appropriated for—

(1) costs of the International Space Station
through completion of assembly may not exceed
\$21,900,000,000; and

24 (2) space shuttle launch costs in connection with
25 the assembly of the International Space Station

1	through completion of assembly may not exceed
2	\$17,700,000,000 (determined at the rate of
3	\$380,000,000 per space shuttle flight).
4	(b) Costs to Which Limitation Applies.—
5	(1) Development costs.—The limitation im-
6	posed by subsection $(a)(1)$ does not apply to funding
7	for operations, research, and crew return activities
8	subsequent to substantial completion of the Inter-
9	national Space Station.
10	(2) LAUNCH COSTS.—The limitation imposed by
11	subsection $(a)(2)$ does not apply to space shuttle
12	launch costs in connection with operations, research,
13	and crew return activities subsequent to substantial
14	completion of the International Space Station.
15	(3) SUBSTANTIAL COMPLETION.—For purposes of
16	this subsection, the International Space Station is
17	considered to be substantially completed when the de-
18	velopment costs comprise 5 percent or less of the total
19	International Space Station costs for the fiscal year.
20	(c) Automatic Increase of Limitation Amount.—
21	The amounts set forth in subsection (a) shall each be in-
22	creased to reflect any increase in costs attributable to—
23	(1) economic inflation;

(2) compliance with changes in Federal, State,
 or local laws enacted after the date of enactment of
 this Act;

4 (3) the lack of performance or the termination of participation of any of the International countries 5 6 participating in the International Space Station; and 7 (4) new technologies to improve safety, reli-8 ability, maintainability, availability, or utilization of 9 the International Space Station, or to reduce costs 10 after completion of assembly, including increases in 11 costs for on-orbit assembly sequence problems, in-12 creased ground testing, verification and integration 13 activities, contingency responses to on-orbit failures, 14 and design improvements to reduce the risk of on-15 orbit failures.

16 (d) NOTICE OF CHANGES.—The Administrator shall provide with each annual budget request a written notice 17 and analysis of any changes under subsection (c) to the 18 amounts set forth in subsection (a) to the Senate Commit-19 tees on Appropriations and on Commerce, Science, and 20 21 Transportation and to the House of Representatives Com-22 mittees on Appropriations and on Science. The written no-23 tice shall include—

24 (1) an explanation of the basis for the change,
25 including the costs associated with the change and the

1	expected benefit to the program to be derived from the
2	change; and
3	(2) an analysis of the impact on the assembly
4	schedule and annual funding estimates of not receiv-
5	ing the requested increases.
6	(e) Reporting and Review.—
7	(1) Identification of costs.—
8	(A) Space shuttle.—As part of the over-
9	all space shuttle program budget request for each
10	fiscal year, the Administrator shall identify sep-
11	arately the amounts of the requested funding that
12	are to be used for completion of the assembly of
13	the International Space Station.
14	(B) INTERNATIONAL SPACE STATION.—As
15	part of the overall International Space Station
16	budget request for each fiscal year, the Adminis-
17	trator shall identify the amount to be used for
18	development of the International Space Station.
19	(2) Accounting for cost limitations.—As
20	part of the annual budget request to the Congress, the
21	Administrator shall account for the cost limitations
22	imposed by subsection (a).
23	(3) VERIFICATION OF ACCOUNTING.—The Admin-
24	istrator shall arrange for a verification, by the Gen-
25	eral Accounting Office, of the accounting submitted to

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3 (4) INSPECTOR GENERAL.—Within 60 days after
4 the Administrator provides a notice and analysis to
5 the Congress under subsection (d), the Inspector Gen6 eral of the National Aeronautics and Space Adminis7 tration shall review the notice and analysis and re8 port the results of the review to the committees to
9 which the notice and analysis was provided.

10 SEC. 203. LIABILITY CROSS-WAIVERS FOR INTERNATIONAL 11 SPACE STATION-RELATED ACTIVITIES

12 (a) IN GENERAL.—Notwithstanding any other provi-13 sion of law, the Administrator, on behalf of the United States, its departments, agencies, and related entities, may 14 15 reciprocally waive claims with cooperating parties, and the related entities of such cooperating parties, under which 16 each party to each such waiver agrees to be responsible, and 17 agrees to ensure that its own related entities are responsible, 18 for damage or loss to its property or to property for which 19 20 it is responsible, or for losses resulting from any injury or 21 death sustained by its own employees or agents, as a result 22 of activities connected to the International Space Station 23 Program.

24 (b) LIMITATIONS.—

1 (1) CLAIMS.—A reciprocal waiver under sub-2 section (a) may not preclude a claim by any natural 3 person (including, but not limited to, a natural per-4 son who is an employee of the United States, the co-5 operating party, or the cooperating party's sub-6 contractors) or that natural person's estate, survivors, 7 or subrogees for injury or death, except with respect to a subrogee that is a party to the waiver or has oth-8 9 erwise agreed to be bound by the terms of the waiver. 10 (2) LIABILITY FOR NEGLIGENCE.—A reciprocal

11 waiver under subsection (a) may not absolve any 12 party of liability to any natural person (including, 13 but not limited to, a natural person who is an em-14 ployee of the United States, the cooperating party, or 15 the cooperating party's subcontractors) or such nat-16 ural person's estate, survivors, or subrogees for neg-17 ligence, except with respect to a subrogee that is a 18 party to the waiver or has otherwise agreed to be 19 bound by the terms of the waiver.

20 (3) INDEMNIFICATION FOR DAMAGES.—A recip21 rocal waiver under subsection (a) may not be used as
22 the basis of a claim by the Administration or the co23 operating party for indemnification against the other
24 for damages paid to a natural person, or that natural
25 person's estate, survivors, or subrogees, for injury or

4 (c) SAFETY OVERSIGHT AND REVIEW REQUIRED.—In the exercise of the authority provided in subsection (a), and 5 consistent with relevant agreements with cooperating par-6 7 ties in the International Space Station Program, the Ad-8 ministrator shall establish overall safety requirements and 9 plans and shall conduct overall integrated system safety reviews for International Space Station elements and pay-10 loads, and may undertake any and all authorized steps (in-11 cluding, but not limited to, removal from launch manifest) 12 13 to ensure, to the maximum extent possible, that such elements and payloads pose no safety risks for the Inter-14 15 national Space Station.

16 (d) DEFINITIONS.—In this section:

(1) COOPERATING PARTY.—The term "cooperating party" means any person who enters into an
agreement or contract with the Administration for the
performance or support of scientific, aeronautical, or
space activities in furtherance of the International
Space Station Program.

23 (2) RELATED ENTITY.—The term "related enti24 ty" includes contractors or subcontractors at any tier,
25 suppliers, grantees, and investigators or detailees.

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1	(3) COMMON TERMS.—Any term used in this sec-
2	tion that is defined in the National Aeronautics and
3	Space Act of 1958 (42 U.S.C. 2451 et seq.) has the
4	same meaning in this section as when it is used in
5	that Act.
6	(e) Effect on Previous Waivers.—Subsection (a)
7	applies to any waiver of claims entered into by the Admin-
8	istrator without regard to whether it was entered into be-
9	fore, on, or after the date of enactment of this Act.
10	TITLE III—MISCELLANEOUS
11	PROVISIONS
12	SEC. 301. NATIONAL AERONAUTICS AND SPACE ACT OF 1958
13	AMENDMENTS.
14	(a) Declaration of Policy and Purpose.—Section
15	102 of the National Aeronautics and Space Act of 1958 (42
16	U.S.C. 2451) is amended—
17	(1) by striking subsection (f);
18	(2) by redesignating subsections (g) and (h) as
19	subsections (f) and (g), respectively; and
20	(3) in subsection (g) , as redesignated by para-
21	graph (1) of this subsection, by striking "(f), and (g)"
22	and inserting "and (f)".
23	(b) Reports to Congress.—Section 206(a) of the
24	National Aeronautics and Space Act of 1958 (42 U.S.C.
25	2476(a)) is amended—

(1) by striking "January" and inserting "May";
 and

3 (2) by striking "calendar" and inserting "fis4 cal".

5 (c) DISCLOSURE OF TECHNICAL DATA.—Section 303
6 of the National Aeronautics and Space Act of 1958 (42
7 U.S.C. 2454) is amended by adding at the end the following
8 new subsection:

9 "(c) The Administrator may delay for a period not 10 to exceed 5 years after development, the unrestricted public 11 disclosure of technical data that would have been a trade 12 secret or commercial or financial information that is privileged or confidential under the meaning of section 552(b)(4)13 of title 5, United States Code, if the information had been 14 15 obtained from a non-Federal party, in any case in which the technical data is generated in the performance of experi-16 mental, developmental, or research activities or programs 17 conducted by, or funded in whole or in part by, the Admin-18 istration. The technical data referred to in the preceding 19 sentence shall not be subject to the disclosure requirements 20 21 of section 552 of title 5, United States Code.".

22 SEC. 302. USE OF EXISTING FACILITIES.

(a) IN GENERAL.—In any case in which the Administrator considers the purchase, lease, or expansion of a facility to meet requirements of the National Aeronautics and

1	Space Administration, the Administrator, taking into ac-
2	count the applicable requirements of Federal law relating
3	to the use or disposal of excess or surplus property, includ-
4	ing the Federal Property and Administrative Services Act
5	of 1949, shall—
6	(1) consider whether there is available to the Ad-
7	ministrator for use for meeting those requirements—
8	(A) any military installation that is closed
9	or being closed;
10	(B) any facility at an installation referred
11	to in subparagraph (A); or
12	(C) any other facility that the Adminis-
13	trator determines to be—
14	(i) owned or leased by the United
15	States for the use of another agency of the
16	Federal Government; and
17	(ii) considered by the head of the agen-
18	cy involved—
19	(I) to be excess to the needs of that
20	agency; or
21	(II) to be underutilized by that
22	agency; and
23	(2) in the case of an underutilized facility avail-
24	able in part for use to meet those requirements, con-
25	sider locating an activity of the National Aeronautics

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as to share the use of the facility with 1 or more
agencies of the Federal Government.

5 (b) ADDITION OR EXPANSION.—To the maximum extent feasible and cost-effective (and not inconsistent with 6 7 the purposes of the Defense Base Closure and Realignment 8 Act of 1990 (104 Stat. 1808 et seq.) and the amendments 9 made by that Act), the Administrator shall meet the re-10 quirements of the National Aeronautics and Space Admin-11 istration for additional or expanded facilities by using facilities that— 12

13 (1) the Administrator considers, pursuant to
14 subsection (a), to be available to the Administrator
15 for use to meet those requirements; and

16 (2) meet the management needs of the National
17 Aeronautics and Space Administration.

18 (c) UNDERUTILIZED INFRASTRUCTURE.—The United 19 States space launch industry has identified underutilized infrastructure at the Stennis Space Center for potential use 20 21 in launch vehicle development activities. The proposed use 22 of this infrastructure is compatible with the Center's pro-23 pulsion test programs and consistent with other efforts to 24 optimize taxpayer investments while fostering United States competitiveness and commercial use of space. The 25

National Aeronautics and Space Administration is encour-1 2 aged to pursue an appropriate method for making the underutilized Stennis Space Center infrastructure available 3 4 under suitable terms and conditions, if so requested by industry, and to notify the United States Senate Committee 5 on Commerce, Science, and Transportation and the United 6 7 States House of Representatives Committee on Science if 8 existing Administration authority is insufficient for this 9 purpose.

10SEC. 303. AUTHORITY TO REDUCE OR SUSPEND CONTRACT11PAYMENTS BASED ON SUBSTANTIAL EVI-12DENCE OF FRAUD.

13 Section 2307(i)(8) of title 10, United States Code, is
14 amended by striking "and (4)" and inserting "(4), and
15 (6)".

16 SEC. 304. NOTICE.

17 (a) NOTICE OF REPROGRAMMING.—If any funds appropriated pursuant to the amendments made by this Act 18 are subject to a reprogramming action that requires notice 19 to be provided to the Committees on Appropriations of the 20 21 Senate and the House of Representatives, notice of that ac-22 tion shall concurrently be provided to the Committee on 23 Commerce, Science, and Transportation of the Senate and 24 the Committee on Science of the House of Representatives.

1 (b) NOTICE OF REORGANIZATION.—Not later than 30 2 days before any major reorganization involving the reassignment of more than 25 percent of the employees of any 3 4 program, project, or activity of the National Aeronautics 5 and Space Administration, the Administrator shall provide notice to the Committees on Commerce, Science, and Trans-6 7 portation and Appropriations of the Senate and the Com-8 mittees on Science and Appropriations of the House of Rep-9 resentatives.

10sec. 305. Sense of congress on the year 2000 prob-11Lem.

With the year 2000 rapidly approaching, it is the sense
of Congress that the Administrator should—

(1) give high priority to correcting all 2-digit
date-related problems in the computer systems of the
National Aeronautics and Space Administration to
ensure that those systems continue to operate effectively in the year 2000 and in subsequent years;

(2) as soon as practicable after the date of enactment of this Act, assess the extent of the risk to the
operations of the National Aeronautics and Space Administration posed by the problems referred to in
paragraph (1), and plan and budget for achieving
compliance for all of the mission-critical systems of
the system by the year 2000; and

1	(3) develop contingency plans for those systems
2	that the National Aeronautics and Space Administra-
3	tion is unable to correct by the year 2000.
4	SEC. 306. UNITARY WIND TUNNEL PLAN ACT OF 1949
5	AMENDMENTS.
6	The Unitary Wind Tunnel Plan Act of 1949 (50
7	U.S.C. 511 et seq.) is amended—
8	(1) in section 101 by striking "transsonic and
9	supersonic" and inserting "transsonic, supersonic,
10	and hypersonic"; and
11	(2) in section 103—
12	(A) in subsection (a)—
13	(i) by striking "laboratories" and in-
14	serting 'laboratories and centers'; and
15	(ii) by striking "supersonic" and in-
16	serting ''transsonic, supersonic, and
17	hypersonic"; and
18	(B) in subsection (c), by striking "labora-
19	tory" and inserting "facility".
20	SEC. 307. ENHANCEMENT OF SCIENCE AND MATHEMATICS
21	PROGRAMS.
22	(a) DEFINITIONS.—In this section:
23	(1) Educationally useful federal equip-
24	MENT.—The term "educationally useful Federal
25	equipment" means computers and related peripheral

tools and research equipment that is appropriate for
 use in schools.
 (2) SCHOOL.—The term "school" means a public
 or private educational institution that serves any of
 the grades of kindergarten through grade 12.

6 (b) SENSE OF CONGRESS.—

7 (1) IN GENERAL.—It is the sense of Congress
8 that the Administrator should, to the greatest extent
9 practicable and in a manner consistent with applica10 ble Federal law (including Executive Order No.
11 12999), donate educationally useful Federal equip12 ment to schools in order to enhance the science and
13 mathematics programs of those schools.

14 (2) REPORTS.—Not later than 1 year after the
15 date of enactment of this Act, and annually there16 after, the Administrator shall prepare and submit to
17 Congress a report describing any donations of educa18 tionally useful Federal equipment to schools made
19 during the period covered by the report.

20 SEC. 308. AUTHORITY TO VEST TITLE.

Title III of the National Aeronautics and Space Act
of 1958 (72 Stat. 432 et seq.) is amended by adding at the
end the following:

1	"AUTHORITY TO VEST TITLE TO TANGIBLE PERSONAL
2	PROPERTY FOR RESEARCH OR TECHNOLOGY DEVELOPMENT
3	"SEC. 313. Notwithstanding any other provision of
4	law, the Administrator may vest title in tangible property
5	(as that term is defined by the Administrator) in any par-
6	ticipant that enters into a cooperative agreement with the
7	Administrator if—
8	"(1) the primary purpose of the participant is to
9	conduct scientific research or technology development;
10	"(2) the property is acquired with amounts pro-
11	vided under a cooperative agreement between the par-
12	ticipant and the Administrator to conduct scientific
13	research or technology development;
14	"(3) the Administrator determines that vesting
15	the title to the property in the participant furthers
16	the objectives of the National Aeronautics and Space
17	Administration; and
18	"(4) the vesting of the title in the participant is
19	made—
20	"(A) on the condition that the United States
21	Government will not incur any further obliga-

- 22 tion; and
- 23 "(B) subject to any other condition that the
 24 Administrator considers to be appropriate.".

2 Section 5062 of the Federal Acquisition Streamlining
3 Act of 1994 (42 U.S.C. 2473 nt) is amended—

4	(1) in subsection (a), by inserting after the first
5	sentence the following: "In addition to providing any
6	other notice of any acquisition under the test con-
7	ducted under this section, the Administrator shall
8	publish a notice of that acquisition in, or make such
9	a notice available through, the automated version of
10	the Commerce Business Daily published by the Sec-
11	retary of Commerce.";
12	(2) in subsection (b), by striking "an estimated
13	annual total obligation of funds of \$500,000 or less"
14	and inserting "a basic value (as that term is defined
15	by the Administrator)—
16	"(1) of \$2,000,000 or less; or
17	"(2) if options to purchase are involved, of
18	\$10,000,000 or less.";
19	(3) in subsection (c), by striking "\$100,000,000"
20	and inserting "\$500,000,000"; and
21	(4) in subsection (f), by striking "4 years" and
22	inserting "6 years".

23 SEC. 310. SPACE ADVERTISING.

24 (a) DEFINITION.—Section 70102 of title 49, United
25 States Code, is amended—

1	(1) by redesignating paragraphs (8) through (16)
2	as paragraphs (9) through (17), respectively; and
3	(2) by inserting after paragraph (7) the fol-
4	lowing:
5	"(8) 'obtrusive space advertising' means adver-
6	tising in outer space that is capable of being recog-
7	nized by a human being on the surface of the Earth
8	without the aid of a telescope or other technological
9	device.".
10	(b) Prohibition.—Chapter 701 of title 49, United
11	States Code, is amended by inserting after section 70109
12	the following new section:
13	"§ 70109a. Space advertising
14	"(a) LICENSING.—Notwithstanding the provisions of
15	this chapter or any other provision of law, the Secretary
16	may not, for the launch of a payload containing any mate-
17	rial to be used for the purposes of obtrusive space
18	advertising—
19	"(1) issue or transfer a license under this chap-
20	ter; or
21	"(2) waive the license requirements of this chap-
22	ter.
23	"(b) LAUNCHING.—No holder of a license under this
24	chapter may launch a payload containing any material to
25	be used for purposes of obtrusive space advertising on or

2	Space Administration Authorization Act for Fiscal Year
3	2000.
4	"(c) Commercial Space Advertising.—Nothing in
5	this section shall apply to nonobtrusive commercial space
6	advertising, including advertising on—
7	"(1) commercial space transportation vehicles;
8	"(2) space infrastructure payloads;
9	"(3) space launch facilities; and
10	"(4) launch support facilities.".
11	(c) Negotiation With Foreign Launching Na-
12	TIONS.—
13	(1) The President is requested to negotiate with
14	foreign launching nations for the purpose of reaching
15	1 or more agreements that prohibit the use of outer
16	space for obtrusive space advertising purposes.
17	(2) It is the sense of Congress that the President
18	should take such action as is appropriate and feasible
19	to enforce the terms of any agreement to prohibit the
20	use of outer space for obtrusive space advertising pur-
21	poses.
22	(3) As used in this subsection, the term "foreign
23	launching nation" means a nation—
24	(A) that launches, or procures the launching
25	of, a payload into outer space; or

1 after the date of enactment of the National Aeronautics and

 (B) from the territory or facility of which
 a payload is launched into outer space.
 (d) CLERICAL AMENDMENT.—The table of sections for
 chapter 701 is amended by inserting after the item relating
 to section 70109 the following: "70109a. Space advertising.".

6 SEC. 311. AUTHORITY TO LICENSE NASA-DEVELOPED SOFT7 WARE.

8 Section 305 of the National Aeronautics and Space Act
9 of 1958 (42 U.S.C. 2457) is amended by adding at the end
10 thereof the following:

11 "(m) AUTHORITY TO LICENSE NASA-DEVELOPED SOFTWARE.—Notwithstanding section 105 of title 17, 12 United States Code, the Administrator may assert copy-13 right in computer software authored by a United States 14 15 Government employee when such software is created while participating with a non-Federal party under an agree-16 ment entered into under section 203(c)(5) and (c)(6) of this 17 Act. The Administrator may grant, to the non-Federal par-18 ticipating party, for royalties or other consideration, li-19 censes or assignments on computer software copyrighted 20 21 pursuant to this subsection and may retain and share such 22 royalties or other consideration consistent with section 14 23 of the Stevenson-Wydler Technology innovation Act of 1980 (15 U.S.C. 3710c).". 24

1	SEC. 312. CARBON CYCLE REMOTE SENSING TECHNOLOGY.
2	(a) CARBON CYCLE REMOTE SENSING TECHNOLOGY
3	Program.—
4	(1) IN GENERAL.—The Administrator of the Na-
5	tional Aeronautics and Space Administration shall
6	develop a carbon cycle remote sensing technology
7	program—
8	(A) to provide, on a near-continual basis, a
9	real-time and comprehensive view of vegetation
10	conditions; and
11	(B) to assess and model agricultural carbon
12	sequestration.
13	(2) Use of centers.—The Administrator of the
14	National Aeronautics and Space Administration shall
15	use regional earth science application centers to con-
16	duct research under this section.
17	(3) Researched Areas.—The areas that shall
18	be the subjects of research conducted under this section
19	include—
20	(A) the mapping of carbon-sequestering
21	land use and land cover;
22	(B) the monitoring of changes in land cover
23	and management;
24	(C) new systems for the remote sensing of
25	soil carbon; and

1 (D) regional-scale carbon sequestration esti-2 mation. 3 (b) REGIONAL EARTH SCIENCE APPLICATION CEN-4 TER.— (1) IN GENERAL.—The Administrator of the Na-5 6 tional Aeronautics and Space Administration, may, 7 at the sole discretion of the Administrator based on 8 maximizing the use of public funds, carry out this 9 section through the Regional Earth Science Applica-10 tion Center located at the University of Kansas (re-

ferred to in this section as the "Center"), if the Center
enters into a partnership with a land-grant college or
university.

14 (2) DUTIES OF CENTER.—The Center shall serve
15 as a research facility and clearinghouse for satellite
16 data, software, research, and related information with
17 respect to remote sensing research conducted under
18 this section.

19 (3) USE OF CENTER.—The Administrator of the
20 National Aeronautics and Space Administration may
21 use the Center for carrying out remote sensing re22 search relating to agricultural best practices.

(c) AUTHORIZATION OF APPROPRIATIONS.—There is
authorized to be appropriated to carry out this section
\$5,000,000 for fiscal years 2000 through 2002.

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1 SEC. 313. INDEMNIFICATION AND INSURANCE.

2 Section 431(d)(5) of the Departments of Veterans Af3 fairs and Housing and Urban Development, and Inde4 pendent Agencies Appropriations Act, 1999 (42 U.S.C.
5 2458b nt) is amended by striking "before the date of enact6 ment of this Act." and inserting "before July 31, 1999.". Attest:

Secretary.



AMENDMENT

- HR 1654 EAS—2
- HR 1654 EAS——3
- HR 1654 EAS——4
- HR 1654 EAS—5