

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.*—

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TITLE I—AUTHORIZATION OF APPROPRIATIONS

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Sec. 102. Launch Vehicle and Payload Operations.

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Sec. 202. Cost limitation for the International Space Station.

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TITLE III—MISCELLANEOUS PROVISIONS

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Sec. 302. Use of existing facilities.

Sec. 303. Authority to reduce or suspend contract payments based on substantial evidence of fraud.

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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.

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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, includ-*
 6 *ing management restructuring, facility consolidation,*
 7 *procurement reform, personnel base downsizing, and*
 8 *convergence with other defense and commercial sector*
 9 *systems, while sustaining safety standards for per-*
 10 *sonnel and hardware.*

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

5 (3) *The United States is on the verge of creating*
6 *and using new technologies in microsattellites, infor-*
7 *mation processing, and space launches that could*
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-

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) *for fiscal year 2000—*

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 (ii) \$254,000,000 shall be used for ad-
25 vanced space transportation technology, of

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) *\$2,262,498,000 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 (ii) \$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.*

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,*

1 *section 103, and paragraphs (1)(A), (1)(B), (2)(A), and*
2 *(2)(B) of section 104 and funds made available by appro-*
3 *priations for research operations support pursuant to sec-*
4 *tion 104 may, at any location in support of the purposes*
5 *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 ap-*
10 *propriation).*

11 *(b) LIMITATION.—*

12 *(1) IN GENERAL.—Until the date specified in*
13 *paragraph (2), no funds may be expended pursuant*
14 *to subsection (a) for a project, with respect to which*
15 *the estimated cost to the National Aeronautics and*
16 *Space Administration, including collateral equip-*
17 *ment, 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,*
23 *location, and estimated cost to the National Aero-*
24 *nautics and Space Administration of the project re-*
25 *ferred to in paragraph (1).*

1 (c) *TITLE TO FACILITIES.*—

2 (1) *IN GENERAL.*—*If funds are used pursuant to*
3 *subsection (a) for grants for the purchase or construc-*
4 *tion of additional research facilities to institutions of*
5 *higher education, or to nonprofit organizations whose*
6 *primary purpose is the conduct of scientific research,*
7 *title to these facilities shall be vested in the United*
8 *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 para-*
17 *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.**

23 *To the extent provided in appropriations Acts, appro-*
24 *priations authorized under subtitle A may remain available*
25 *without fiscal year limitation.*

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

3 (a) *USE OF CONSTRUCTION FUNDS.*—Subject to sub-
4 section (b), in addition to the amounts authorized for con-
5 struction of facilities under section 101(4) or section 103(3),
6 the Administrator may, for that purpose, from funds other-
7 wise available to the Administrator—

8 (1) *use an additional amount equal to 10 per-*
9 *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*
16 *Transportation of the Senate and the Committee on*
17 *Science of the House of Representatives.*

18 (b) *LIMITATION.*—The aggregate amount authorized to
19 be appropriated for construction of facilities under section
20 101(4) and section 103(3) shall not be increased as a result
21 of any action taken by the Administrator under paragraph
22 (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

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 Admin-*
5 *istrator relied on to support the proposed action re-*
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*
11 *to all activities and responsibilities of the National Aero-*
12 *nautics and Space Administration within the jurisdiction*
13 *of those committees.*

14 **SEC. 115. USE OF FUNDS FOR SCIENTIFIC CONSULTATIONS**
15 **OR EXTRAORDINARY EXPENSES.**

16 *Not more than \$35,000 of the amounts made available*
17 *by appropriations pursuant to section 103 may be used by*
18 *the Administrator for scientific consultations or extraor-*
19 *dinary expenses.*

20 **TITLE II—INTERNATIONAL**
21 **SPACE STATION**

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 in-*

1 *kind payments shall be transferred to any entity of the Rus-*
2 *sian Government or any Russian contractor to perform*
3 *work on the International Space Station which the Russian*
4 *Government pledged, at any time, to provide at its expense.*
5 *This subsection shall not apply to the purchase or modifica-*
6 *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.*

12 (b) *CONTINGENCY PLAN FOR RUSSIAN ELEMENTS IN*
13 *CRITICAL PATH.—The Administrator shall develop and de-*
14 *liver to Congress, within 60 days of enactment, a contin-*
15 *gency plan for the removal or replacement of each Russian*
16 *Government element of the International Space Station*
17 *that lies in the Station’s critical path, as well as Russian*
18 *space launch services. Such plan shall include—*

19 (1) *decision points for removing or replacing*
20 *those elements and launch services, to the maximum*
21 *extent feasible, necessary for completion of the Inter-*
22 *national Space Station;*

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

1 (3) *the cost, to the extent determinable, of removing or replacing a Russian Government critical path element or launch service after its decision point has passed, if—*

2 (A) *the decision at that point was not to remove or replace the Russian Government element or launch service; and*

3 (B) *the National Aeronautics and Space Administration later determines that the Russian Government will be unable to provide the critical path element or launch service in a manner to allow completion of the International Space Station.*

4 (c) *BIMONTHLY REPORTING ON RUSSIAN STATUS.—*
5 *On or before December 1, 1999, and until substantial completion (as defined in section 202(b)(3) of this Act) of the assembly of the International Space Station, the Administrator shall report to Congress on the first day of every other month whether or not the Russians have performed work expected of them and necessary to complete the International Space Station. Such report shall also include a statement of the Administrator’s judgment concerning Russia’s ability to perform work anticipated and required to complete the International Space Station before the next report 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,*
5 *other Russian elements in the critical path of the Inter-*
6 *national Space Station, or Russian launch services. Such*
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*
11 *President decides to proceed with a permanent replacement*
12 *for the Russian Service Module or any other Russian ele-*
13 *ment in the critical path or Russian launch service, the*
14 *President shall notify Congress of the reasons and the jus-*
15 *tification for the decision to proceed with the permanent*
16 *replacement, and the costs associated with the decision.*

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

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

21 (1) *costs of the International Space Station*
22 *through completion of assembly may not exceed*
23 *\$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;*

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

4 (3) *the lack of performance or the termination of*
5 *participation of any of the International countries*
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*
17 *provide with each annual budget request a written notice*
18 *and analysis of any changes under subsection (c) to the*
19 *amounts set forth in subsection (a) to the Senate Commit-*
20 *tees on Appropriations and on Commerce, Science, and*
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*

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
8 to a subrogee that is a party to the waiver or has oth-
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 recip-
21 rocal waiver under subsection (a) may not be used as
22 the basis of a claim by the Administration or the co-
23 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

1 *death sustained by that natural person as a result of*
2 *activities connected to the International Space Sta-*
3 *tion Program.*

4 *(c) SAFETY OVERSIGHT AND REVIEW REQUIRED.—In*
5 *the exercise of the authority provided in subsection (a), and*
6 *consistent with relevant agreements with cooperating par-*
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 re-*
10 *views for International Space Station elements and pay-*
11 *loads, and may undertake any and all authorized steps (in-*
12 *cluding, but not limited to, removal from launch manifest)*
13 *to ensure, to the maximum extent possible, that such ele-*
14 *ments and payloads pose no safety risks for the Inter-*
15 *national Space Station.*

16 *(d) DEFINITIONS.—In this section:*

17 *(1) COOPERATING PARTY.—The term “cooper-*
18 *ating party” means any person who enters into an*
19 *agreement or contract with the Administration for the*
20 *performance or support of scientific, aeronautical, or*
21 *space activities in furtherance of the International*
22 *Space Station Program.*

23 *(2) RELATED ENTITY.—The term “related enti-*
24 *ty” includes contractors or subcontractors at any tier,*
25 *suppliers, grantees, and investigators or detailees.*

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 (1) by striking “January” and inserting “May”;

2 *and*

3 (2) by striking “calendar” and inserting “fis-

4 *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 privi-*

13 *leged or confidential under the meaning of section 552(b)(4)*

14 *of title 5, United States Code, if the information had been*

15 *obtained from a non-Federal party, in any case in which*

16 *the technical data is generated in the performance of experi-*

17 *mental, developmental, or research activities or programs*

18 *conducted by, or funded in whole or in part by, the Admin-*

19 *istration. The technical data referred to in the preceding*

20 *sentence shall not be subject to the disclosure requirements*

21 *of section 552 of title 5, United States Code.”.*

22 **SEC. 302. USE OF EXISTING FACILITIES.**

23 (a) *IN GENERAL.*—*In any case in which the Adminis-*

24 *trator considers the purchase, lease, or expansion of a facil-*

25 *ity 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*

1 *and Space Administration for which a facility is re-*
2 *quired at that underutilized facility in such manner*
3 *as to share the use of the facility with 1 or more*
4 *agencies of the Federal Government.*

5 *(b) ADDITION OR EXPANSION.—To the maximum ex-*
6 *tent feasible and cost-effective (and not inconsistent with*
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 fa-*
12 *cilities that—*

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*
20 *infrastructure at the Stennis Space Center for potential use*
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*
25 *States competitiveness and commercial use of space. The*

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

10 **SEC. 303. AUTHORITY TO REDUCE OR SUSPEND CONTRACT**
11 **PAYMENTS BASED ON SUBSTANTIAL EVI-**
12 **DENCE 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 ap-*
18 *propriated pursuant to the amendments made by this Act*
19 *are subject to a reprogramming action that requires notice*
20 *to be provided to the Committees on Appropriations of the*
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 reas-
3 signment of more than 25 percent of the employees of any
4 program, project, or activity of the National Aeronautics
5 and Space Administration, the Administrator shall provide
6 notice to the Committees on Commerce, Science, and Trans-
7 portation and Appropriations of the Senate and the Com-
8 mittees on Science and Appropriations of the House of Rep-
9 resentatives.

10 **SEC. 305. SENSE OF CONGRESS ON THE YEAR 2000 PROB-**
11 **LEM.**

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

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

19 (2) as soon as practicable after the date of enact-
20 ment of this Act, assess the extent of the risk to the
21 operations of the National Aeronautics and Space Ad-
22 ministration posed by the problems referred to in
23 paragraph (1), and plan and budget for achieving
24 compliance for all of the mission-critical systems of
25 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*

1 *tools and research equipment that is appropriate for*
2 *use in schools.*

3 (2) *SCHOOL.*—*The term “school” means a public*
4 *or private educational institution that serves any of*
5 *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 applica-*
10 *ble Federal law (including Executive Order No.*
11 *12999), donate educationally useful Federal equip-*
12 *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 there-*
16 *after, the Administrator shall prepare and submit to*
17 *Congress a report describing any donations of educa-*
18 *tionally useful Federal equipment to schools made*
19 *during the period covered by the report.*

20 **SEC. 308. AUTHORITY TO VEST TITLE.**

21 *Title III of the National Aeronautics and Space Act*
22 *of 1958 (72 Stat. 432 et seq.) is amended by adding at the*
23 *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.”.

1 **SEC. 309. NASA MID-RANGE PROCUREMENT TEST PROGRAM.**

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

1 *after the date of enactment of the National Aeronautics and*
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 (B) from the territory or facility of which
2 a payload is launched into outer space.

3 (d) *CLERICAL AMENDMENT.*—The table of sections for
4 chapter 701 is amended by inserting after the item relating
5 to section 70109 the following:

“70109a. Space advertising.”.

6 **SEC. 311. AUTHORITY TO LICENSE NASA-DEVELOPED SOFT-**
7 **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*
12 *SOFTWARE.*—Notwithstanding section 105 of title 17,
13 United States Code, the Administrator may assert copy-
14 right in computer software authored by a United States
15 Government employee when such software is created while
16 participating with a non-Federal party under an agree-
17 ment entered into under section 203(c)(5) and (c)(6) of this
18 Act. The Administrator may grant, to the non-Federal par-
19 ticipating party, for royalties or other consideration, li-
20 censes or assignments on computer software copyrighted
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
24 (15 U.S.C. 3710c).”.

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.—

5 (1) IN GENERAL.—The Administrator of the Na-
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-
11 ferred to in this section as the “Center”), if the Center
12 enters into a partnership with a land-grant college or
13 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 re-
22 search relating to agricultural best practices.

23 (c) AUTHORIZATION OF APPROPRIATIONS.—There is
24 authorized to be appropriated to carry out this section
25 \$5,000,000 for fiscal years 2000 through 2002.

1 **SEC. 313. INDEMNIFICATION AND INSURANCE.**

2 *Section 431(d)(5) of the Departments of Veterans Af-*
3 *fairs and Housing and Urban Development, and Inde-*
4 *pendent Agencies Appropriations Act, 1999 (42 U.S.C.*
5 *2458b nt) is amended by striking “before the date of enact-*
6 *ment of this Act.” and inserting “before July 31, 1999.”.*

Attest:

Secretary.

106TH CONGRESS
1ST SESSION

H. R. 1654

AMENDMENT

HR 1654 EAS—2

HR 1654 EAS—3

HR 1654 EAS—4

HR 1654 EAS—5