

Union Calendar No. 354

103D CONGRESS
2D SESSION

H. R. 4489

[Report No. 103-654]

A BILL

To authorize appropriations to the National Aeronautics and Space Administration for human space flight, science, aeronautics, and technology, mission support, and Inspector General, and for other purposes.

AUGUST 3, 1994

Reported with an amendment, committed to the Committee of the Whole House on the State of the Union, and ordered to be printed

Union Calendar No. 354

103^D CONGRESS
2^D SESSION

H. R. 4489

[Report No. 103-654]

To authorize appropriations to the National Aeronautics and Space Administration for human space flight, science, aeronautics, and technology, mission support, and Inspector General, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

MAY 25, 1994

Mr. BROWN of California introduced the following bill; which was referred to the Committee on Science, Space, and Technology

AUGUST 3, 1994

Reported with an amendment, committed to the Committee of the Whole House on the State of the Union, and ordered to be printed

[Strike out all after the enacting clause and insert the part printed in italic]

[For text of introduced bill, see copy of bill as introduced on May 25, 1994]

A BILL

To authorize appropriations to the National Aeronautics and Space Administration for human space flight, science, aeronautics, and technology, mission support, and Inspector General, and for other purposes.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*

1 **SECTION 1. SHORT TITLE.**

2 *This Act may be cited as the “National Aeronautics*
3 *and Space Administration Authorization Act, Fiscal Years*
4 *1995 and 1996”.*

5 **SEC. 2. FINDINGS.**

6 *The Congress finds that—*

7 *(1) the National Aeronautics and Space Admin-*
8 *istration will require a stable budget, adjusted for in-*
9 *flation, in order to carry out the initiatives now*
10 *planned in human space flight and science, aero-*
11 *navitics, and technology;*

12 *(2) cooperation in space should continue to be a*
13 *major element of the post-cold war foreign policy*
14 *agenda through a broad range of scientific and engi-*
15 *neering programs that have the potential to stabilize*
16 *the scientific and industrial base of the former Soviet*
17 *Union and encourage the transition toward political*
18 *reform and a market-based economy;*

19 *(3) the National Aeronautics and Space Admin-*
20 *istration should aggressively pursue actions and re-*
21 *forms directed at reducing institutional costs, includ-*
22 *ing management restructuring, facility consolidation,*
23 *procurement reform, personnel base downsizing, and*
24 *convergence with other defense and private sector sys-*
25 *tems; and*

1 (4) *in formulating a national space transpor-*
2 *tation policy, the National Aeronautics and Space*
3 *Administration should take the lead role in develop-*
4 *ing advanced space transportation technologies in-*
5 *cluding reusable space vehicles, single-stage-to-orbit*
6 *vehicles, and manned space systems.*

7 **SEC. 3. DEFINITIONS.**

8 *For purposes of this Act—*

9 (1) *the term “Administrator” means the Admin-*
10 *istrator of the National Aeronautics and Space Ad-*
11 *ministration; and*

12 (2) *the term “institution of higher education”*
13 *has the meaning given such term in section 1201(a)*
14 *of the Higher Education Act of 1965 (20 U.S.C.*
15 *1141(a)).*

16 **TITLE I—AUTHORIZATION OF**
17 **APPROPRIATIONS**

18 **Subtitle A—Authorizations**

19 **SEC. 101. HUMAN SPACE FLIGHT.**

20 (a) *AUTHORIZATIONS.—There are authorized to be ap-*
21 *propriated to the National Aeronautics and Space Admin-*
22 *istration for Human Space Flight the following amounts:*

23 (1) *For the Space Station, \$1,889,600,000 for*
24 *fiscal year 1995, and \$1,833,600,000 for fiscal year*
25 *1996.*

1 (2) *For Russian Cooperation, \$150,100,000 for*
2 *fiscal year 1995, of which \$50,100,000 shall be for*
3 *space station related expenditures, and \$129,200,000*
4 *for fiscal year 1996, of which \$29,200,000 shall be for*
5 *space station related expenditures.*

6 (3) *For the Space Shuttle, \$3,292,000,000 for fis-*
7 *cal year 1995, and \$3,252,700,000 for fiscal year*
8 *1996.*

9 (4) *For Payload and Utilization Operations,*
10 *\$321,200,000 for fiscal year 1995, and \$301,100,000*
11 *for fiscal year 1996.*

12 (b) *CONSTRUCTION OF FACILITIES.—(1) Of the funds*
13 *authorized to be appropriated under subsection (a)(1) for*
14 *fiscal year 1995, \$20,200,000 are authorized for construc-*
15 *tion of a Neutral Buoyancy Laboratory, Johnson Space*
16 *Center.*

17 (2) *Of the funds authorized to be appropriated under*
18 *subsection (a)(3) for fiscal year 1995, \$4,800,000 are au-*
19 *thorized for modernization of the Firex System, Pads A and*
20 *B, Kennedy Space Center.*

21 (3) *Of the funds authorized to be appropriated under*
22 *subsection (a)(3) for fiscal year 1995, \$7,500,000 are au-*
23 *thorized for replacement of the Components Refurbishment*
24 *Laboratory, Kennedy Space Center.*

1 **SEC. 102. SCIENCE, AERONAUTICS, AND TECHNOLOGY.**

2 (a) *AUTHORIZATIONS.*—There are authorized to be ap-
3 propriated to the National Aeronautics and Space Admin-
4 istration for Science, Aeronautics, and Technology the fol-
5 lowing amounts:

6 (1) *For Space Science*—

7 (A) *\$1,773,000,000 for fiscal year 1995, of*
8 *which—*

9 (i) *\$1,081,700,000 are authorized for*
10 *Physics and Astronomy; and*

11 (ii) *\$691,300,000 are authorized for*
12 *Planetary Exploration, including*
13 *\$129,700,000 for the Discovery program*
14 *and \$4,000,000 for Venus data analysis;*
15 *and*

16 (B) *\$1,763,000,000 for fiscal year 1996, of*
17 *which—*

18 (i) *\$1,173,100,000 are authorized for*
19 *Physics and Astronomy, including*
20 *\$20,000,000 for the Stratospheric Observ-*
21 *atory for Infrared Astronomy and*
22 *\$50,000,000 for the Solar-Terrestrial*
23 *Probes; and*

24 (ii) *\$589,900,000 are authorized for*
25 *Planetary Exploration, including*
26 *\$122,400,000 for the Discovery program,*

1 \$10,000,000 for the Pluto Fast Flyby, and
2 \$4,000,000 for Venus data analysis.

3 (2) For Life and Microgravity Sciences and Ap-
4 plications, \$470,900,000 for fiscal year 1995, of which
5 \$155,800,000 shall be for space station related ex-
6 penditures, and \$527,400,000 for fiscal year 1996, of
7 which \$233,500,000 shall be for space station related
8 expenditures, and of which at least \$2,000,000 for
9 each such fiscal year is reserved for research on the
10 causes of breast and ovarian cancers and other wom-
11 en's health issues.

12 (3) For Mission to Planet Earth, \$1,214,100,000
13 for fiscal year 1995, of which \$9,800,000 shall be for
14 space station related expenditures, and of which
15 \$726,000,000 are authorized for the Earth Observing
16 System (EOS), including the EOS Data and Infor-
17 mation System, and of which \$18,000,000 shall be for
18 the Consortium for International Earth Science Infor-
19 mation Network, and \$1,276,100,000 for fiscal year
20 1996, of which \$9,800,000 shall be for space station
21 related expenditures, and of which \$847,500,000 are
22 authorized for the Earth Observing System (EOS),
23 including the EOS Data and Information System,
24 and of which \$18,000,000 shall be for the Consortium
25 for International Earth Science Information Network.

1 *Beginning in fiscal year 1996, amounts appropriated*
2 *for the Global Observations to Benefit the Environ-*
3 *ment, or any other program established to perform*
4 *substantially the same functions, may be obligated*
5 *only to the extent that an equal or greater amount of*
6 *non-Federal funding is provided for such program.*

7 *(4) For Advanced Concepts and Technology—*

8 *(A) \$640,700,000 for fiscal year 1995, of*
9 *which \$15,000,000 shall be for space station re-*
10 *lated expenditures, and of which \$40,000,000 are*
11 *authorized for the Single-Stage-to-Orbit (SSTO)*
12 *X-vehicle development and supporting ground-*
13 *based test program, \$13,600,000 are authorized*
14 *for University Space Engineering Research Cen-*
15 *ters, and \$47,900,000 are authorized for the*
16 *Small Spacecraft Technology Initiative, except*
17 *that funds for such Initiative may not be ex-*
18 *pended—*

19 *(i) to duplicate private sector activities*
20 *or to fund any activities that a private sec-*
21 *tor entity is proposing to carry out for com-*
22 *mercial purposes; or*

23 *(ii) for projects that are initiated after*
24 *the date of enactment of this Act unless such*
25 *projects require cost-sharing by industry at*

1 *levels consistent with comparable joint Gov-*
2 *ernment-industry advanced technology de-*
3 *velopment programs; and*

4 *(B) \$747,300,000 for fiscal year 1996, of*
5 *which \$15,000,000 shall be for space station re-*
6 *lated expenditures, and of which \$116,000,000*
7 *are authorized for the Single-Stage-to-Orbit*
8 *(SSTO) X-vehicle development and supporting*
9 *ground-based test program.*

10 *(5) For Aeronautical Research and Technology,*
11 *\$898,500,000 for fiscal year 1995, and \$941,900,000*
12 *for fiscal year 1996, of which—*

13 *(A) \$342,800,000 for fiscal year 1995, and*
14 *\$343,700,000 for fiscal year 1996, are authorized*
15 *for Research and Technology Base activities, in-*
16 *cluding \$10,000,000 for each such fiscal year for*
17 *the Rotorcraft Technology Center Program;*

18 *(B) \$221,300,000 for fiscal year 1995 are*
19 *authorized for High Speed Research, including*
20 *\$12,000,000 for Environmental Impact Assess-*
21 *ments, and \$245,500,000 for fiscal year 1996 are*
22 *authorized for High Speed Research, including*
23 *\$12,500,000 for Environmental Impact Assess-*
24 *ments;*

1 (C) \$125,800,000 for fiscal year 1995 are
2 authorized for Advanced Subsonic Technology,
3 including \$24,000,000 for Terminal Area Pro-
4 ductivity and \$13,000,000 for Short Haul Air-
5 craft, and \$158,500,000 for fiscal year 1996 are
6 authorized for Advanced Subsonic Technology,
7 including \$25,000,000 for Terminal Area Pro-
8 ductivity and \$20,000,000 for Short Haul Air-
9 craft; and

10 (D) \$186,600,000 for fiscal year 1995, and
11 \$186,200,000 for fiscal year 1996 are authorized
12 for Other Systems Technology Programs, includ-
13 ing \$40,000,000 for each such fiscal year for the
14 Hypersonic Research Program.

15 (6) For Launch Services, \$331,100,000 for fiscal
16 year 1995, and \$279,000,000 for fiscal year 1996.

17 (7) For Mission Communication Services,
18 \$481,200,000 for fiscal year 1995, and \$486,600,000
19 for fiscal year 1996.

20 (8) For Academic Programs, \$97,200,000 for fis-
21 cal year 1995, and \$111,700,000 for fiscal year 1996.

22 (b) CONSTRUCTION OF FACILITIES.—(1) Of the funds
23 authorized to be appropriated under subsection (a)(3) for
24 fiscal year 1995, \$17,000,000 are authorized for construc-

1 *tion of the Earth Systems Science Building, Goddard Space*
2 *Flight Center.*

3 *(2) Of the funds authorized to be appropriated under*
4 *subsection (a)(5), \$22,000,000 for fiscal year 1995 and*
5 *\$8,000,000 for fiscal year 1996 are authorized for mod-*
6 *ernization of the Unitary Plan Wind Tunnel Complex,*
7 *Ames Research Center.*

8 *(c) SCIENTIFIC COOPERATION WITH RUSSIA.—*

9 *(1) SENSE OF CONGRESS.—It is the sense of*
10 *Congress that the National Aeronautics and Space*
11 *Administration should seek, to the maximum extent*
12 *practicable, to undertake joint scientific activities*
13 *with Russia with an initial focus on the robotic ex-*
14 *ploration of Mars. Such joint scientific activities may*
15 *include other spacefaring nations, as appropriate.*

16 *(2) MARS TRANSITION PLAN.—The Adminis-*
17 *trator shall provide to the Congress by February 15,*
18 *1995, a detailed plan for the transition of the Mars*
19 *Surveyor program to an integrated Mars exploration*
20 *program with Russia and other spacefaring nations,*
21 *as appropriate.*

22 **SEC. 103. MISSION SUPPORT.**

23 *There are authorized to be appropriated to the Na-*
24 *tional Aeronautics and Space Administration for Mission*
25 *Support the following amounts:*

1 (1) *For Safety, Reliability, and Quality Assur-*
2 *ance, \$38,700,000 for fiscal year 1995, and*
3 *\$38,800,000 for fiscal year 1996.*

4 (2) *For Space Communication Services,*
5 *\$218,900,000 for fiscal year 1995, and \$320,300,000*
6 *for fiscal year 1996.*

7 (3) *For Construction of Facilities, including*
8 *land acquisition—*

9 (A) *\$135,000,000 for fiscal year 1995, of*
10 *which—*

11 (i) *\$8,000,000 are authorized to per-*
12 *form seismic upgrade of the Research, De-*
13 *velopment, and Test Building, Dryden*
14 *Flight Research Center;*

15 (ii) *\$5,000,000 are authorized to re-*
16 *store the Exterior/Interior Systems, Build-*
17 *ings 3, 13, and 14, Goddard Space Flight*
18 *Center;*

19 (iii) *\$4,300,000 are authorized to mod-*
20 *ernize the Condenser Water Systems, South-*
21 *ern Sector, Jet Propulsion Laboratory;*

22 (iv) *\$4,300,000 are authorized to reha-*
23 *bilitate the Utility Tunnel Structure and*
24 *Systems, Johnson Space Center;*

1 (v) \$1,500,000 are authorized to mod-
2 ernize the Payloads Hazardous Servicing
3 Facility HVAC System, Kennedy Space
4 Center;

5 (vi) \$4,900,000 are authorized to mod-
6 ernize the Metrology and Calibration Facil-
7 ity, Marshall Space Flight Center;

8 (vii) \$30,000,000 are authorized to re-
9 pair facilities at various locations, not in
10 excess of \$1,000,000 per project;

11 (viii) \$30,000,000 are authorized to re-
12 habilitate and modify facilities at various
13 locations, not in excess of \$1,000,000 per
14 project;

15 (ix) \$2,000,000 are authorized for
16 minor construction of new facilities and ad-
17 ditions to existing facilities at various loca-
18 tions, not in excess of \$750,000 per project;

19 (x) \$10,000,000 are authorized for fa-
20 cility planning and design; and

21 (xi) \$35,000,000 are authorized for en-
22 vironmental compliance and restoration;
23 and

24 (B) \$170,900,000 for fiscal year 1996, of
25 which \$5,000,000, less any amounts made avail-

1 *able pursuant to paragraph (5), shall be for the*
2 *establishment of a Visitor Center for the Lewis*
3 *Research Center, if at least—*

4 *(i) an equal amount of funding;*

5 *(ii) in-kind resources of equivalent*
6 *value; or*

7 *(iii) a combination thereof,*

8 *are provided for such purpose from non-Federal*
9 *sources.*

10 *(4) For Research and Program Management, in-*
11 *cluding personnel and related costs, travel, and re-*
12 *search operations support, \$2,192,300,000 for fiscal*
13 *year 1995, and \$2,200,000,000 for fiscal year 1996.*

14 *(5) For the establishment of a Visitor Center for*
15 *the Lewis Research Center, to the extent provided in*
16 *advance in appropriations Acts, all unobligated funds*
17 *available to the Administrator from appropriations*
18 *for fiscal years before fiscal year 1995, but not to ex-*
19 *ceed \$5,000,000, if at least—*

20 *(A) an equal amount of funding;*

21 *(B) in-kind resources of equivalent value; or*

22 *(C) a combination thereof,*

23 *are provided for such purpose from non-Federal*
24 *sources.*

1 **SEC. 104. INSPECTOR GENERAL.**

2 *There are authorized to be appropriated to the Na-*
3 *tional Aeronautics and Space Administration for Inspector*
4 *General, \$16,000,000 for fiscal year 1995, and \$16,500,000*
5 *for fiscal year 1996.*

6 **SEC. 105. TOTAL AUTHORIZATION.**

7 *Notwithstanding any other provision of this title, the*
8 *total amount authorized to be appropriated under this Act*
9 *shall not exceed \$14,105,500,000 for fiscal year 1995, and*
10 *\$14,400,000,000 for fiscal year 1996.*

11 ***Subtitle B—Limitations and***
12 ***Special Authority***

13 **SEC. 111. USE OF FUNDS FOR CONSTRUCTION.**

14 *(a) AUTHORIZED USES.—Funds appropriated under*
15 *sections 101(a), 102(a), and 103 (1) and (2), and funds*
16 *appropriated for research operations support under section*
17 *103(4), may be used for the construction of new facilities*
18 *and additions to, repair of, rehabilitation of, or modifica-*
19 *tion of existing facilities at any location in support of the*
20 *purposes for which such funds are authorized.*

21 *(b) LIMITATION.—None of the funds used pursuant to*
22 *subsection (a) may be expended for a project, the estimated*
23 *cost of which to the National Aeronautics and Space Ad-*
24 *ministration, including collateral equipment, exceeds*
25 *\$500,000, until 30 days have passed after the Administrator*
26 *has notified the Committee on Science, Space, and Tech-*

1 *nology of the House of Representatives and the Committee*
2 *on Commerce, Science, and Transportation of the Senate*
3 *of the nature, location, and estimated cost to the National*
4 *Aeronautics and Space Administration of such project.*

5 *(c) TITLE TO FACILITIES.—If funds are used pursuant*
6 *to subsection (a) for grants to institutions of higher edu-*
7 *cation, or to nonprofit organizations whose primary pur-*
8 *pose is the conduct of scientific research, for purchase or*
9 *construction of additional research facilities, title to such*
10 *facilities shall be vested in the United States unless the Ad-*
11 *ministrator determines that the national program of aero-*
12 *nautical and space activities will best be served by vesting*
13 *title in the grantee institution or organization. Each such*
14 *grant shall be made under such conditions as the Adminis-*
15 *trator shall determine to be required to ensure that the*
16 *United States will receive therefrom benefits adequate to*
17 *justify the making of that grant.*

18 **SEC. 112. AVAILABILITY OF APPROPRIATED AMOUNTS.**

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

22 **SEC. 113. REPROGRAMMING FOR CONSTRUCTION OF FA-**
23 **CILITIES.**

24 *(a) IN GENERAL.—Appropriations authorized under*
25 *any paragraph of section 101(b), 102(b), or 103(3)—*

1 (1) may be varied upward by 10 percent in the
2 discretion of the Administrator; or

3 (2) may be varied upward by 25 percent, to meet
4 unusual cost variations, after the expiration of 15
5 days following a report on the circumstances of such
6 action by the Administrator to the Committee on
7 Science, Space, and Technology of the House of Rep-
8 resentatives and the Committee on Commerce,
9 Science, and Transportation of the Senate.

10 The aggregate amount authorized to be appropriated under
11 sections 101(b), 102(b) and 103(3) shall not be increased
12 as a result of actions authorized under paragraphs (1) and
13 (2) of this subsection.

14 (b) *SPECIAL RULE.*—Where the Administrator deter-
15 mines that new developments in the national program of
16 aeronautical and space activities have occurred; and that
17 such developments require the use of additional funds for
18 the purposes of construction, expansion, or modification of
19 facilities at any location; and that deferral of such action
20 until the enactment of the next National Aeronautics and
21 Space Administration Authorization Act would be incon-
22 sistent with the interest of the Nation in aeronautical and
23 space activities, the Administrator may use up to
24 \$10,000,000 of the amounts authorized under section
25 101(b), 102(b), or 103(3) for each fiscal year for such pur-

1 *poses. No such funds may be obligated until a period of*
2 *30 days has passed after the Administrator has transmitted*
3 *to the Committee on Commerce, Science, and Transpor-*
4 *tation of the Senate and the Committee on Science, Space,*
5 *and Technology of the House of Representatives a written*
6 *report describing the nature of the construction, its costs,*
7 *and the reasons therefor.*

8 **SEC. 114. CONSIDERATION BY COMMITTEES.**

9 *Notwithstanding any other provision of this Act—*

10 *(1) no amount appropriated to the National Aer-*
11 *onautics and Space Administration may be used for*
12 *any program for which the President's annual budget*
13 *request included a request for funding, but for which*
14 *the Congress denied or did not provide funding;*

15 *(2) no amount appropriated to the National Aer-*
16 *onautics and Space Administration may be used for*
17 *any program in excess of the amount actually author-*
18 *ized for the particular program by subtitle A; and*

19 *(3) no amount appropriated to the National Aer-*
20 *onautics and Space Administration may be used for*
21 *any program which has not been presented to the*
22 *Congress in the President's annual budget request or*
23 *the supporting and ancillary documents thereto,*

24 *unless a period of 30 days has passed after the receipt by*
25 *the Committee on Science, Space, and Technology of the*

1 *House of Representatives and the Committee on Commerce,*
2 *Science, and Transportation of the Senate of notice given*
3 *by the Administrator containing a full and complete state-*
4 *ment of the action proposed to be taken and the facts and*
5 *circumstances relied upon in support of such proposed ac-*
6 *tion. The National Aeronautics and Space Administration*
7 *shall keep the Committee on Science, Space, and Technology*
8 *of the House of Representatives and the Committee on Com-*
9 *merce, Science, and Transportation of the Senate fully and*
10 *currently informed with respect to all activities and respon-*
11 *sibilities within the jurisdiction of those committees. Except*
12 *as otherwise provided by law, any Federal department,*
13 *agency, or independent establishment shall furnish any in-*
14 *formation requested by either committee relating to any*
15 *such activity or responsibility.*

16 **SEC. 115. LIMITATION ON OBLIGATION OF UNAUTHORIZED**
17 **APPROPRIATIONS.**

18 (a) *REPORTS TO CONGRESS.*—*Not later than 30 days*
19 *after the later of the date of enactment of an Act making*
20 *appropriations to the National Aeronautics and Space Ad-*
21 *ministration for fiscal year 1995 and the date of enactment*
22 *of this Act, and not later than 30 days after the date of*
23 *enactment of an Act making such appropriations for fiscal*
24 *year 1996, the Administrator shall submit a report to Con-*
25 *gress and to the Comptroller General which specifies—*

1 (1) *the portion of such appropriations which are*
2 *for programs, projects, or activities not authorized*
3 *under subtitle A of this title, or which are in excess*
4 *of amounts authorized for the relevant program,*
5 *project, or activity under this Act; and*

6 (2) *the portion of such appropriations which are*
7 *authorized under this Act.*

8 (b) *FEDERAL REGISTER NOTICE.*—*The Administrator*
9 *shall, coincident with the submission of the report required*
10 *by subsection (a), publish in the Federal Register a notice*
11 *of all programs, projects, or activities for which funds are*
12 *appropriated but which were not authorized under this Act,*
13 *and solicit public comment thereon regarding the impact*
14 *of such programs, projects, or activities on the conduct and*
15 *effectiveness of the national aeronautics and space program.*

16 (c) *LIMITATION.*—*Notwithstanding any other provi-*
17 *sion of this Act, no funds may be obligated for any pro-*
18 *grams, projects, or activities of the National Aeronautics*
19 *and Space Administration for fiscal years 1995 and 1996*
20 *not authorized under this Act until 30 days have passed*
21 *after the close of the public comment period contained in*
22 *the notice required in subsection (b).*

1 **SEC. 116. USE OF FUNDS FOR SCIENTIFIC CONSULTATIONS**
2 **OR EXTRAORDINARY EXPENSES.**

3 *Funds appropriated under section 102 may be used,*
4 *but not to exceed \$35,000 per fiscal year, for scientific con-*
5 *sultations or extraordinary expenses upon the authority of*
6 *the Administrator.*

7 **SEC. 117. TERMINATION LIABILITY.**

8 (a) *AUTHORITY.*—*The Administrator may enter into*
9 *contracts for the Space Station program that are for periods*
10 *in excess of the period for which funds are available for*
11 *obligation, and may provide for payment for contingent li-*
12 *ability which may accrue in excess of available appropria-*
13 *tions in the event the Federal Government for its conven-*
14 *ience terminates such contracts.*

15 (b) *TERMINATION.*—*If funds are not available to con-*
16 *tinue any such contract, the contract shall be terminated*
17 *for the convenience of the Government, and the costs of ter-*
18 *mination of such contract shall be paid—*

19 (1) *first from appropriations originally available*
20 *for performance of the contract; and*

21 (2) *then from other unobligated appropriations*
22 *authorized for Human Space Flight under this Act,*
23 *or any subsequent Act, that the Chief Financial Offi-*
24 *cer of the National Aeronautics and Space Adminis-*
25 *tration determines are available for such purposes.*

1 **SEC. 118. VOLUNTARY SEPARATION INCENTIVES.**

2 *The Administrator shall, to the maximum extent prac-*
3 *ticable, make voluntary separation incentive payments pur-*
4 *suant to the Federal Workforce Restructuring Act of 1994*
5 *(Public Law 103–226) to employees of the National Aero-*
6 *navics and Space Administration from funds appro-*
7 *priated for fiscal year 1995 and available for such pay-*
8 *ments.*

9 **SEC. 119. LIMITATION ON TRANSFERS TO RUSSIA.**

10 (a) *LIMITATION.*—*No funds authorized to be appro-*
11 *priated to the National Aeronautics and Space Administra-*
12 *tion for fiscal year 1995 or 1996 may be paid or otherwise*
13 *transferred to Russia unless—*

14 (1) *the purpose of the payment or transfer is au-*
15 *thorized by this Act;*

16 (2) *the payment or transfer is made in exchange*
17 *for goods or services that have been provided to the*
18 *National Aeronautics and Space Administration in*
19 *accordance with a written agreement between the Na-*
20 *tional Aeronautics and Space Administration and*
21 *Russia;*

22 (3) *the Government of the Russian Federation*
23 *agrees to provide a monthly report to the National*
24 *Aeronautics and Space Administration during the*
25 *term of such written agreement, that fully accounts*
26 *for the disposition of the funds paid or transferred,*

1 *including information with respect to the preceding*
2 *month on—*

3 *(A) the amount of the funds received, and*
4 *the date of receipt;*

5 *(B) the amount of the funds converted from*
6 *United States currency, the currency into which*
7 *the funds have been converted, and the date and*
8 *rate of conversion;*

9 *(C) the amount of non-United States cur-*
10 *rency, and of United States currency, that is dis-*
11 *bursed to any contractor or subcontractor, the*
12 *identity of such contractor or subcontractor, and*
13 *the date of disbursement; and*

14 *(D) the balance of the funds not disbursed*
15 *as of the date of the report;*

16 *(4) Russia has provided all monthly reports with*
17 *respect to which an agreement was made pursuant to*
18 *paragraph (3); and*

19 *(5) the President, before such payment or trans-*
20 *fer and annually upon submission of the President's*
21 *budget request for fiscal years after fiscal year 1995,*
22 *has certified to the Congress that—*

23 *(A) the presence of any troops of the Rus-*
24 *sian Federation or the Commonwealth of Inde-*
25 *pendent States; and*

1 (B) any action by the Russian Federation
2 or the Commonwealth of Independent States,
3 in Estonia, Latvia, Lithuania, or any other inde-
4 pendent state of the former Soviet Union do not vio-
5 late the sovereignty of those independent states.

6 (b) *DEFINITION.*—For purposes of this section, the
7 term “Russia” means the Government of the Russian Fed-
8 eration, the Russian Space Agency, or any agency or in-
9 strumentality of the Government of the Russian Federation
10 or the Russian Space Agency.

11 **SEC. 120. SPACE STATION SPENDING CAP.**

12 The total amount of spending by the National Aero-
13 nautics Space Administration for the space station shall
14 not exceed \$2,120,900,000 for fiscal year 1995 and
15 \$2,122,100,000 for fiscal year 1996. The limitations in this
16 section shall not apply to amounts provided for payments
17 to Russia for phase I of the International Space Station
18 program.

19 **SEC. 121. CONSORTIUM FOR INTERNATIONAL EARTH**
20 **SCIENCE INFORMATION NETWORK BUILDING.**

21 The Consortium for International Earth Science Infor-
22 mation Network may not obligate more than \$27,000,000
23 for the construction of a new building. Such funds may not
24 be obligated until 90 days after the completion of a building
25 prospectus by the General Services Administration.

1 **SEC. 122. LIMITATION ON APPROPRIATIONS.**

2 *Notwithstanding any other provision of this Act, no*
 3 *funds are authorized to be appropriated for carrying out*
 4 *the programs for which funds are authorized by this Act*
 5 *for any fiscal year after fiscal year 1996.*

6 **TITLE II—MISCELLANEOUS**
 7 **PROVISIONS**

8 **SEC. 201. COMMERCIAL SPACE LAUNCH AMENDMENTS.**

9 *(a) AMENDMENTS.—Chapter 701 of title 49, United*
 10 *States Code, is amended—*

11 *(1) in the table of sections—*

12 *(A) by amending the item relating to sec-*
 13 *tion 70104 to read as follows:*

“70104. Restrictions on launches, operations, and reentries.”;

14 *(B) by amending the item relating to sec-*
 15 *tion 70108 to read as follows:*

“70108. Prohibition, suspension, and end of launches, operation of launch sites,
and reentries.”;

16 *(C) by amending the item relating to sec-*
 17 *tion 70109 to read as follows:*

“70109. Preemption of scheduled launches or reentries.”;

18 *and*

19 *(D) by adding at the end the following new*
 20 *item:*

“70120. Report to Congress.”;

21 *(2) in section 70102—*

1 (A) by inserting “from Earth” after “and
2 any payload” in paragraph (3);

3 (B) by redesignating paragraphs (10)
4 through (12) as paragraphs (12) through (14),
5 respectively; and

6 (C) by inserting after paragraph (9) the fol-
7 lowing new paragraphs:

8 “(10) ‘reenter’ and ‘reentry’ mean to return pur-
9 posefully, or attempt to return, a reentry vehicle and
10 payload, if any, from Earth orbit or outer space to
11 Earth.

12 “(11) ‘reentry vehicle’ means any vehicle de-
13 signed to return from Earth orbit or outer space to
14 Earth substantially intact.”;

15 (3) in section 70104—

16 (A) by amending the section designation
17 and heading to read as follows:

18 **“§ 70104. Restrictions on launches, operations, and re-**
19 **entries”;**

20 (B) by inserting “, or reenter a reentry ve-
21 hicle,” after “operate a launch site” each place
22 it appears in subsection (a);

23 (C) by inserting “or reentry” after “launch
24 or operation” in subsection (a)(3) and (4);

25 (D) in subsection (b)—

1 (i) by striking “launch license” and
2 inserting in lieu thereof “license”;

3 (ii) by inserting “or reenter” after
4 “may launch”; and

5 (iii) by inserting “or reentering” after
6 “related to launching”; and

7 (E) in subsection (c)—

8 (i) by amending the subsection heading
9 to read as follows: “PREVENTING LAUNCHES
10 OR REENTRIES.—”;

11 (ii) by inserting “or reentry” after
12 “prevent the launch”; and

13 (iii) by inserting “or reentry” after
14 “decides the launch”;

15 (4) in section 70105—

16 (A) by inserting “, or reentry of a reentry
17 vehicle,” after “operation of a launch site” in
18 subsection (b)(1); and

19 (B) by striking “or operation” and insert-
20 ing in lieu thereof “, operation, or reentry” in
21 subsection (b)(2)(A);

22 (5) in section 70106(a)—

23 (A) by inserting “or reentry site” after “ob-
24 server at a launch site”; and

1 (B) by inserting “or reentry vehicle” after
2 “assemble a launch vehicle”;

3 (6) in section 70108—

4 (A) by amending the section designation
5 and heading to read as follows:

6 **“§ 70108. Prohibition, suspension, and end of**
7 **launches, operation of launch sites, and**
8 **reentries”;**

9 and

10 (B) in subsection (a)—

11 (i) by inserting “, or reentry of a re-
12 entry vehicle,” after “operation of a launch
13 site”; and

14 (ii) by inserting “or reentry” after
15 “launch or operation”;

16 (7) in section 70109—

17 (A) by amending the section designation
18 and heading to read as follows:

19 **“§ 70109. Preemption of scheduled launches or reen-**
20 **tries”;**

21 (B) in subsection (a)—

22 (i) by inserting “or reentry” after “en-
23 sure that a launch”;

24 (ii) by inserting “, reentry site,” after
25 “United States Government launch site”;

1 (iii) by inserting “or reentry date com-
2 mitment” after “launch date commitment”;

3 (iv) by inserting “or reentry” after
4 “obtained for a launch”;

5 (v) by inserting “, reentry site,” after
6 “access to a launch site”;

7 (vi) by inserting “, or services related
8 to a reentry,” after “amount for launch
9 services”; and

10 (vii) by inserting “or reentry” after
11 “the scheduled launch”; and

12 (C) in subsection (c), by inserting “or re-
13 entry” after “prompt launching”;

14 (8) in section 70110—

15 (A) by inserting “or reentry” after “prevent
16 the launch” in subsection (a)(2); and

17 (B) by inserting “, or reentry of a reentry
18 vehicle,” after “operation of a launch site” in
19 subsection (a)(3)(B);

20 (9) in section 70112—

21 (A) by inserting “or reentry” after “one
22 launch” in subsection (a)(3);

23 (B) by inserting “or reentry” after “launch
24 services” in subsection (a)(4);

1 (C) by inserting “or a reentry” after
2 “launch services” each place it appears in sub-
3 section (b);

4 (D) by inserting “OR REENTRIES” after
5 “LAUNCHES” in the heading for subsection (e);
6 and

7 (E) by inserting “or reentry” after “launch
8 site” in subsection (e);

9 (10) in section 70113(a)(1) and (d)(1) and (2),
10 by inserting “or reentry” after “one launch” each
11 place it appears;

12 (11) in section 70115(b)(1)(D)(i)—

13 (A) by inserting “reentry site,” after
14 “launch site,”; and

15 (B) by inserting “or reentry vehicle” after
16 “site of a launch vehicle”;

17 (12) in section 70117—

18 (A) by inserting “or reenter a reentry vehi-
19 cle” after “operate a launch site” in subsection
20 (a);

21 (B) by inserting “or reentry” after “ap-
22 proval of a space launch” in subsection (d);

23 (C) in subsection (f)—

24 (i) by inserting “OR REENTRY” after
25 “LAUNCH” in the subsection heading;

1 (ii) by inserting “, reentry vehicle,”
2 after “A launch vehicle”;

3 (iii) by inserting “or reentered” after
4 “that is launched”; and

5 (iv) by inserting “or reentry” after
6 “the launch”; and

7 (D) in subsection (g)—

8 (i) by inserting “reentry of a reentry
9 vehicle,” after “or launch site,” in para-
10 graph (1); and

11 (ii) by inserting “reentry,” after
12 “launch,” in paragraph (2);

13 (13) in section 70119, by inserting the following
14 after paragraph (2):

15 “*There are authorized to be appropriated to the Secretary*
16 *of Transportation \$6,060,000 to carry out this chapter for*
17 *fiscal year 1995.*”; and

18 (14) by adding at the end the following new sec-
19 tion:

20 **“§ 70120. Report to Congress**

21 “*The Secretary of Transportation shall submit to Con-*
22 *gress an annual report to accompany the President’s budget*
23 *request that—*

24 “*(1) describes all activities undertaken under*
25 *this chapter, including a description of the process for*

1 *the application for and approval of licenses under*
2 *this chapter and recommendations for legislation that*
3 *may further commercial launches and reentries; and*

4 *“(2) reviews the performance of the regulatory*
5 *activities and the effectiveness of the Office of Com-*
6 *mercial Space Transportation.”.*

7 *(b) ADDITIONAL AMENDMENTS.—(1) Section 70105 of*
8 *title 49, United States Code, is amended—*

9 *(A) in subsection (a), by striking “receiving an*
10 *application” both places it appears and inserting in*
11 *lieu thereof “accepting an application in accordance*
12 *with subsection (b)(2)(D)”;*

13 *(B) by striking “and” at the end of subsection*
14 *(b)(2)(B);*

15 *(C) by striking the period at the end of sub-*
16 *section (b)(2)(C) and inserting in lieu thereof “;*
17 *and”;* and

18 *(D) by adding at the end of subsection (b)(2) the*
19 *following new subparagraph:*

20 *“(D) regulations establishing criteria for accept-*
21 *ing an application for a license under this chapter.”.*

22 *(2) The amendment made by paragraph (1)(A) shall*
23 *take effect upon the effective date of final regulations issued*
24 *pursuant to section 70105(b)(2)(D) of title 49, United*

1 *States Code, as added by paragraph (1)(D) of this sub-*
2 *section.*

3 **SEC. 202. OFFICE OF SPACE COMMERCE AUTHORIZATION.**

4 *There are authorized to be appropriated to the Sec-*
5 *retary of Commerce for the activities of the Office of Space*
6 *Commerce, \$532,000 for fiscal year 1995.*

7 **SEC. 203. USE OF DOMESTIC PRODUCTS.**

8 *(a) GENERAL RULE.—Except as provided in sub-*
9 *section (b), the Administrator shall ensure that procure-*
10 *ments are conducted in compliance with sections 2 through*
11 *4 of the Act of March 3, 1933 (41 U.S.C. 10a through 10c,*
12 *popularly known as the “Buy American Act”).*

13 *(b) LIMITATIONS.—This section shall apply only to*
14 *procurements made for which—*

15 *(1) amounts are authorized by this Act to be*
16 *made available; and*

17 *(2) solicitations for bids are issued after the date*
18 *of enactment of this Act.*

19 *(c) INAPPLICABILITY IN CASE OF VIOLATION OF*
20 *INTERNATIONAL AGREEMENT.—This section shall not apply*
21 *to the extent that the United States Trade Representative*
22 *determines that a procurement described in subsection (b)*
23 *would be in violation of the General Agreement on Tariffs*
24 *and Trade or an international agreement to which the*
25 *United States is a party.*

1 (d) *PURCHASE OF AMERICAN MADE EQUIPMENT AND*
2 *PRODUCTS.—*

3 (1) *SENSE OF CONGRESS.—It is the sense of*
4 *Congress that any recipient of a grant under this Act,*
5 *or under any amendment made by this Act, should*
6 *purchase, when available and cost-effective, American*
7 *made equipment and products when expending grant*
8 *monies.*

9 (2) *NOTICE TO RECIPIENTS OF ASSISTANCE.—In*
10 *allocating grants under this Act, or under any*
11 *amendment made by this Act, the Secretary shall pro-*
12 *vide to each recipient a notice describing the state-*
13 *ment made in paragraph (1) by the Congress.*

14 **SEC. 204. REQUIREMENT FOR INDEPENDENT COST**
15 **ANALYSIS.**

16 *The Chief Financial Officer for the National Aero-*
17 *nautics and Space Administration shall be responsible for*
18 *conducting independent cost analyses of all new projects es-*
19 *timated to cost more than \$5,000,000 and shall report the*
20 *results annually to Congress at the time of the submission*
21 *of the President's budget request. In developing cost ac-*
22 *counting and reporting standards for carrying out this sec-*
23 *tion, the Chief Financial Officer shall, to the extent prac-*
24 *ticable and consistent with other laws, solicit the advice of*

1 *expertise outside of the National Aeronautics and Space Ad-*
2 *ministration.*

3 **SEC. 205. GLOBAL CHANGE DATA AND INFORMATION**
4 **SYSTEM.**

5 *Title I of the Global Change Research Act of 1990 (15*
6 *U.S.C. 2931 et seq.) is amended by adding at the end the*
7 *following new section:*

8 **“SEC. 109. GLOBAL CHANGE DATA AND INFORMATION**
9 **SYSTEM.**

10 *“(a) The National Aeronautics and Space Administra-*
11 *tion, in coordination with other agencies that belong to the*
12 *Committee established under section 102, shall establish the*
13 *requirements and architecture for, design, and develop a*
14 *Global Change Data and Information System that shall*
15 *serve as the system to process, archive, and distribute data*
16 *generated by the Global Change Research Program.*

17 *“(b) The National Aeronautics and Space Administra-*
18 *tion shall design the Global Change Data and Information*
19 *System—*

20 *“(1) so that other Federal agencies may connect*
21 *data centers operated by such agencies to such Sys-*
22 *tem; and*

23 *“(2) so as to minimize, to the extent practicable,*
24 *the cost of connecting such data centers.*

1 **SEC. 207. NATIONAL AERONAUTICS AND SPACE ACT OF 1958**

2 **AMENDMENTS.**

3 (a) *REPORTS TO THE CONGRESS.*—Section 206(a) of
4 the National Aeronautics and Space Act of 1958 (42 U.S.C.
5 2476(a)) is amended—

6 (1) by striking “January” and inserting in lieu
7 thereof “May”; and

8 (2) by striking “calendar” and inserting in lieu
9 thereof “fiscal”.

10 (b) *DISCLOSURE OF TECHNICAL DATA.*—Section 303
11 of the National Aeronautics and Space Act of 1958 (42
12 U.S.C. 2454) is amended—

13 (1) in subsection (a)(C), by inserting “or (c)”
14 after “subsection (b)”; and

15 (2) by adding at the end the following new sub-
16 section:

17 “(c)(1) The Administration may delay for a period not
18 to exceed 5 years the unrestricted public disclosure of tech-
19 nical data in the possession of, or under the control of, the
20 Administration that has been generated in the performance
21 of experimental, developmental, or research activities or
22 programs funded jointly by the Administration and the pri-
23 vate sector.

24 “(2) The Administrator shall issue regulations to carry
25 out this subsection. Paragraph (1) shall not take effect until
26 such regulations are issued.

1 “(3) Regulations issued pursuant to paragraph (2)
2 shall include—

3 “(A) guidelines for a determination of whether
4 data is technical data within the meaning of this sub-
5 section;

6 “(B) a requirement that a determination de-
7 scribed in subparagraph (A) that particular data is
8 technical data shall be reported to the Committee on
9 Science, Space, and Technology of the House of Rep-
10 resentatives and the Committee on Commerce,
11 Science, and Transportation of the Senate;

12 “(C) provisions to ensure that technical data is
13 available for dissemination within the United States
14 to United States persons and entities in furtherance
15 of the objective of maintaining leadership or competi-
16 tiveness in civil and governmental aeronautical and
17 space activities by the United States industrial base;
18 and

19 “(D) a specification of the period or periods for
20 which the delay in unrestricted public disclosure of
21 technical data is to apply to various categories of
22 such data, and the restrictions on disclosure of such
23 data during such period or periods, including a re-
24 quirement that the maximum 5-year protection under
25 this subsection shall not be provided unless at least 50

1 *percent of the funding for the activities or programs*
2 *is provided by the private sector.*

3 “(4) *Along with the initial publication of proposed reg-*
4 *ulations under paragraph (2), the Administrator shall in-*
5 *clude a list of those experimental, developmental, or re-*
6 *search activities or programs conducted by, or funded in*
7 *whole or in part by, the Administration that may result*
8 *in products or processes of significant value in maintaining*
9 *leadership or competitiveness in civil and governmental*
10 *aeronautical and space activities by the United States in-*
11 *dustrial base. Such list shall be updated biannually.*

12 “(5) *For purposes of this subsection, the term ‘tech-*
13 *nical data’ means any recorded information, including*
14 *computer software, that is or may be directly applicable*
15 *to the design, engineering, development, production, manu-*
16 *facture, or operation of products or processes that may have*
17 *significant value in maintaining leadership or competitive-*
18 *ness in civil and governmental aeronautical and space ac-*
19 *tivities by the United States industrial base.’”.*

20 **SEC. 208. COMPARATIVE ANALYSIS OF UNITED STATES AND**
21 **FOREIGN EXPENDABLE SPACE LAUNCH SYS-**
22 **TEMS.**

23 *The National Aeronautics and Space Administration*
24 *shall conduct a comprehensive study of the differences be-*
25 *tween existing United States and foreign expendable space*

1 *launch vehicles. This study shall determine specific dif-*
2 *ferences in the design, manufacture, processing, and overall*
3 *management and infrastructure of current United States*
4 *and foreign expendable space launch vehicles. The study*
5 *shall also determine the approximate effect of these dif-*
6 *ferences on the relative cost, reliability, and operational effi-*
7 *ciency of such space launch systems. This study shall be*
8 *conducted in consultation with the Department of Defense*
9 *and, as appropriate, other Federal agencies, United States*
10 *industries, and institutions of higher education. The results*
11 *of this study shall be submitted to the Congress no later*
12 *than October 1, 1995.*

13 **SEC. 209. UNIVERSITY INNOVATIVE RESEARCH PROGRAM**

14 **STUDY.**

15 (a) *FINDINGS.*—*The Congress finds that—*

16 (1) *institutions of higher education offer a sig-*
17 *nificant resource for the conduct of innovative sci-*
18 *entific and technological research to advance the Na-*
19 *tional Aeronautics and Space Administration's mis-*
20 *sion;*

21 (2) *the National Aeronautics and Space Admin-*
22 *istration should act to broaden the foundation of its*
23 *research base by increasing the direct involvement of*
24 *research laboratories of institutions of higher edu-*

1 *cation in the development of technology for space*
2 *science;*

3 *(3) the National Aeronautics and Space Admin-*
4 *istration should commit to strengthening research*
5 *programs in technology of institutions of higher edu-*
6 *cation beyond contracting with institutions of higher*
7 *education for services in support of specific programs;*
8 *and*

9 *(4) the National Aeronautics and Space Admin-*
10 *istration should develop mechanisms to foster innova-*
11 *tive technological research at institutions of higher*
12 *education that do not participate in the University*
13 *Space Engineering Research Centers.*

14 *(b) STUDY.—The Administrator shall undertake a*
15 *study of the feasibility and potential implementation of a*
16 *University Innovative Research Program which—*

17 *(1) promotes technological innovation in the*
18 *United States by using the Nation's institutions of*
19 *higher education to help meet the National Aero-*
20 *navics and Space Administration's research and de-*
21 *velopment needs, by stimulating technology transfer*
22 *between institutions of higher education and industry,*
23 *and by encouraging participation by minority and*
24 *disadvantaged persons in technological innovation;*

1 (2) is modeled on the Small Business Innovation
2 Research Program;

3 (3) avoids duplication of existing National Aero-
4 nautics and Space Administration programs with the
5 institutions of higher education; and

6 (4) derives funding from the Space Research and
7 Technology program.

8 (c) *COMPLETION.*—The study required by subsection
9 (b) shall be completed and its results submitted to the Con-
10 gress within one year after the date of enactment of this
11 Act.

12 (d) *ADVICE.*—In carrying out the study required by
13 subsection (b), the Administrator shall seek the advice of
14 the National Aeronautics and Space Administration Advi-
15 sory Council, the National Research Council's Aeronautics
16 and Space Engineering Board and Space Studies Board,
17 and other organizations as appropriate.

18 **SEC. 210. GEOGRAPHICAL DISTRIBUTION.**

19 The National Aeronautics and Space Administration
20 shall give consideration to geographical distribution of its
21 research and development funds whenever feasible.

22 **SEC. 211. ADDITIONAL NATIONAL AERONAUTICS AND**
23 **SPACE ADMINISTRATION FACILITIES.**

24 (a) *SELECTION IN DEPRESSED COMMUNITIES.*—When
25 consistent with the goals of the National Aeronautics and

1 *Space Administration and cost-effective, the Administrator*
2 *shall select sites in depressed communities for new programs*
3 *or functions of the National Aeronautics and Space Admin-*
4 *istration, unless those new programs or functions are so*
5 *closely related to programs or functions carried out at an*
6 *existing facility as to require being carried out at that exist-*
7 *ing facility.*

8 (b) *DEFINITIONS.*—*For purposes of this section, the*
9 *term “depressed communities” means rural and urban com-*
10 *munities that are relatively depressed, in terms of age of*
11 *housing, extent of poverty, growth of per capita income, ex-*
12 *tent of unemployment, job lag, or surplus labor.*

13 ***SEC. 212. RECIPROCITY.***

14 (a) *GENERAL RULE.*—*Except as provided in sub-*
15 *section (b), no contract or subcontract may be made with*
16 *funds authorized under this Act to a company organized*
17 *under the laws of a foreign country unless the Adminis-*
18 *trator finds that such country affords comparable opportu-*
19 *nities to companies organized under the laws of the United*
20 *States.*

21 (b) *EXCEPTION.*—(1) *The Administrator may waive*
22 *the rule stated under subsection (a) if the products or serv-*
23 *ices required are not reasonably available from—*

24 (A) *companies organized under the laws of the*
25 *United States; or*

1 (B) companies organized under the laws of a for-
2 foreign country which the Administrator finds affords
3 comparable opportunities to companies organized
4 under the laws of the United States.

5 Any such waiver shall be reported to the Congress.

6 (2) Subsection (a) shall not apply to the extent that
7 to do so would violate the General Agreement on Tariffs
8 and Trade or any other international agreement to which
9 the United States is a party.

10 **SEC. 213. STUDY ON TDRSS AND COMMERCIAL SATELLITE**
11 **SYSTEM CONVERGENCE.**

12 (a) *REQUIREMENT.*—The Administrator shall conduct
13 a study on the convergence of the National Aeronautics and
14 Space Administration Tracking and Data Relay Satellite
15 System (TDRSS) with commercial communications sat-
16 ellite systems. The study shall assess whether a converged
17 system, from which the National Aeronautics and Space
18 Administration would buy tracking and data relay services,
19 could—

20 (1) satisfy the National Aeronautics and Space
21 Administration's tracking and data relay require-
22 ments;

23 (2) reduce the National Aeronautics and Space
24 Administration's expenses in satisfying tracking and

1 *data relay requirements through maintenance and op-*
2 *erations of the TDRSS;*

3 (3) *be financed, developed, and operated by the*
4 *private sector;*

5 (4) *serve commercial communication needs;*

6 (5) *be established to satisfy the National Aero-*
7 *navitics and Space Administration's requirements in*
8 *time to obviate the need to procure TDRSS spacecraft*
9 *beyond the tenth flight; and*

10 (6) *encourage the growth of the commercial sat-*
11 *ellite communications market.*

12 (b) *CONSULTATION.*—*In conducting the study, the Ad-*
13 *ministrator shall consult with commercial satellite opera-*
14 *tors, including the International Telecommunications Sat-*
15 *ellite Organization, other international satellite operators,*
16 *and United States satellite operators, as appropriate, and*
17 *shall also consult with the Department of Defense concern-*
18 *ing its requirements for tracking and data relay services.*

19 (c) *REPORT.*—*The Administrator shall report on the*
20 *study's findings and recommendations on feasibility of con-*
21 *vergence to the Committee on Science, Space, and Tech-*
22 *nology of the House of Representatives and the Committee*
23 *on Commerce, Science, and Transportation of the Senate*
24 *by February 15, 1995.*

1 **SEC. 214. STUDY ON CONVERGENCE OF GEOSAT AND EOS**
2 **ALTIMETRY PROGRAMS.**

3 (a) *REQUIREMENT.*—The Administrator shall conduct
4 a study on the convergence of the National Aeronautics and
5 Space Administration Earth Observing System (EOS) Al-
6 timetry mission with the Navy Geosat Follow-On program.
7 The study shall assess whether a converged system, which
8 may involve minor modifications to the Geosat Follow-On
9 satellite, could—

10 (1) *satisfy the needs of the Earth Observing Sys-*
11 *tem program for altimetry data;*

12 (2) *reduce the National Aeronautics and Space*
13 *Administration's expenses in satisfying such needs;*

14 (3) *be available in time to serve as the follow-on*
15 *to the Topex/Poseidon mission; and*

16 (4) *continue to meet the Navy's requirements for*
17 *altimetry data at no additional cost to the Navy.*

18 (b) *CONSULTATION.*—In conducting the study, the Ad-
19 *ministrator shall consult with the Navy and the scientific*
20 *community, as appropriate.*

21 (c) *REPORT.*—The Administrator shall report on the
22 *study's findings and recommendations on the feasibility of*
23 *convergence to the Committee on Science, Space, and Tech-*
24 *nology of the House of Representatives and the Committee*
25 *on Commerce, Science, and Transportation of the Senate*
26 *by February 15, 1995.*

1 **SEC. 215. SPACE SHUTTLE COST REDUCTION INITIATIVES.**

2 *By February 1, 1995, the Administrator shall submit*
3 *a report to the Committee on Science, Space, and Tech-*
4 *nology of the House of Representatives and the Committee*
5 *on Commerce, Science, and Transportation of the Senate*
6 *that—*

7 *(1) specifies the minimum number of Space*
8 *Shuttle flights that would be required each fiscal year*
9 *from 1995 through 2004 to implement payload and*
10 *related activities provided for in the President's fiscal*
11 *year 1995 budget request and supporting and ancil-*
12 *lary documents thereto;*

13 *(2) outlines the Space Shuttle flight and payload*
14 *manifest that could be implemented for each of the fis-*
15 *cal years 1995 through 1999 if the Space Shuttle*
16 *flight rate for each of those years were 8 missions, if*
17 *the flight rate were 7 missions, and if the flight rate*
18 *were 6 missions;*

19 *(3) evaluates the extent to which various poten-*
20 *tial management consolidation initiatives could re-*
21 *duce the annual cost of the Space Shuttle program*
22 *while preserving quality and safety; and*

23 *(4) evaluates the extent to which various poten-*
24 *tial contract incentives could be used to reduce the*
25 *annual cost of the Space Shuttle program while pre-*
26 *serving quality and safety.*

1 **SEC. 216. ADVANCED LAUNCH TECHNOLOGY PROGRAM.**

2 (a) *FUNDING POLICY.*—The Administrator may use,
3 and is encouraged to use, any funds appropriated for Space
4 Shuttle operations, but not needed for such purposes because
5 of a reduction in annual operating costs, for an advanced
6 launch technology program, including the cost of technology
7 development, flight demonstrators, and procurement of
8 operational flight hardware.

9 (b) *REPORT TO CONGRESS.*—By February 1, 1995, the
10 Administrator shall submit to the Congress a program plan
11 for an advanced launch technology program that—

12 (1) *clearly articulates the goals and objectives of*
13 *the program and the flight hardware it will produce;*

14 (2) *describes the management structure and de-*
15 *velopment philosophy that will be used to implement*
16 *the program;*

17 (3) *outlines key milestones toward the achieve-*
18 *ment of the goals and objectives articulated under*
19 *paragraph (1);*

20 (4) *estimates the total cost that will have been*
21 *incurred upon completion of the program;*

22 (5) *defines the annual budgetary requirements of*
23 *the program for the next 5 years; and*

24 (6) *identifies the source or sources of funding an-*
25 *ticipated for the program for each of the next 5 years,*
26 *including funds described in subsection (a).*

1 **SEC. 217. LAND CONVEYANCE.**

2 *The Administrator may accept the conveyance to the*
3 *United States of certain parcels of land from the cities of*
4 *Cleveland and Brook Park, Ohio, for the purpose of estab-*
5 *lishing a Visitor Center for the Lewis Research Center.*

6 **SEC. 218. PROCUREMENT.**

7 *(a) PROCUREMENT DEMONSTRATION PROGRAM.—*

8 *(1) IN GENERAL.—The Administrator shall es-*
9 *tablish within the Office of Advanced Concepts and*
10 *Technology a program of expedited technology pro-*
11 *curement for the purpose of demonstrating how inno-*
12 *vative technology concepts can rapidly be brought to*
13 *bear upon space missions of the National Aeronautics*
14 *and Space Administration.*

15 *(2) PROCEDURES AND EVALUATION.—The Ad-*
16 *ministrator shall establish procedures for actively*
17 *seeking from nongovernment persons innovative tech-*
18 *nology concepts relating to the provision of space*
19 *hardware, technology, or services to the National Aer-*
20 *onautics and Space Administration, and for the eval-*
21 *uation of such concepts by the National Aeronautics*
22 *and Space Administration's Advisory Council against*
23 *mission requirements.*

24 *(3) REQUIREMENT.—At least 2 percent of*
25 *amounts authorized to be appropriated under section*
26 *102(a)(4) for each fiscal year shall be used for inno-*

1 *vative technology procurements that are determined*
2 *under paragraph (2) of this subsection to meet mis-*
3 *sion requirements.*

4 (4) *SPECIAL AUTHORITY.*—*In order to carry out*
5 *this subsection the Administrator shall recruit and*
6 *hire for limited term appointments persons from the*
7 *nongovernmental sector with special expertise and ex-*
8 *perience related to the innovative technology concepts*
9 *with respect to which procurements are made under*
10 *this subsection.*

11 (5) *SUNSET.*—*This subsection shall cease to be*
12 *effective 10 years after the date of its enactment.*

13 (b) *TECHNOLOGY PROCUREMENT INITIATIVE.*—

14 (1) *IN GENERAL.*—*The Administrator shall co-*
15 *ordinate National Aeronautics and Space Adminis-*
16 *tration resources in the areas of procurement, com-*
17 *mercial programs, and advanced technology in order*
18 *to—*

19 (A) *fairly assess and procure commercially*
20 *available technology from the marketplace in the*
21 *most efficient manner practicable;*

22 (B) *achieve a continuous pattern of inte-*
23 *grating advanced technology from the commer-*
24 *cial sector into the missions and programs of the*
25 *National Aeronautics and Space Administration;*

1 (C) incorporate private sector buying and
2 bidding procedures, including fixed price con-
3 tracts, into procurements; and

4 (D) provide incentives for cost-plus contrac-
5 tors of the National Aeronautics and Space Ad-
6 ministration to integrate commercially available
7 technology in subsystem contracts on a fixed-
8 price basis.

9 (2) *CERTIFICATION.*—Upon solicitation of any
10 procurement for space hardware, technology, or serv-
11 ices that are not commercially available, the Adminis-
12 trator shall certify, by publication of a notice and op-
13 portunity to comment in the *Commerce Business*
14 *Daily*, for each such procurement action, that no
15 functional equivalent, commercially available space
16 hardware, technology, or service exists and that no
17 commercial method of procurement is available.

18 **SEC. 219. ADDITIONAL NATIONAL AERONAUTICS AND**
19 **SPACE ADMINISTRATION FACILITIES.**

20 The Administrator shall not construct or enter into a
21 new lease for facilities to support National Aeronautics and
22 Space Administration programs unless the Administrator
23 has certified to the Congress that the Administrator has re-
24 viewed existing National Aeronautics and Space Adminis-
25 tration and other federally owned facilities, including mili-

1 tary facilities scheduled for closing or reduction, and found
2 no such facilities appropriate for the intended use.

3 **SEC. 220. SPACE STATION ACCOUNTING REPORT.**

4 *Within one year after the date of enactment of this*
5 *Act, and annually thereafter, the Administrator shall trans-*
6 *mit to the Congress a report with a complete annual ac-*
7 *counting of all costs of the space station, including cash*
8 *and other payments to Russia.*

9 **SEC. 221. PURCHASE OF SPACE SCIENCE DATA.**

10 (a) *IN GENERAL.*—*To the maximum extent possible,*
11 *the National Aeronautics and Space Administration shall*
12 *purchase from the private sector space science data. Exam-*
13 *ples of such data include scientific data concerning the ele-*
14 *mental and mineralogical resources of the moon and the*
15 *planets, Earth environmental data obtained through remote*
16 *sensing observations, and solar storm monitoring.*

17 (b) *COMPETITIVE BIDDING.*—(1) *Contracts for the*
18 *purchase of space data under this section shall be awarded*
19 *in a process of full, fair, and open competitive bidding.*

20 (2) *Submission of cost data, either for the purposes of*
21 *supporting the bid or fulfillment of the contract, shall not*
22 *be required of bidders.*

23 (3) *Conformance with military specifications*
24 *(Milspec) or National Aeronautics and Space Administra-*
25 *tion specifications systems with respect to the design, con-*

1 *struction, or operation of equipment used in obtaining*
2 *space science data under contracts entered into under this*
3 *section shall not be a requirement for a commercial provider*
4 *bidding to provide such services.*

5 *(4) Contracts under this section shall not provide for*
6 *the Federal Government to obtain ownership of data not*
7 *specifically sought by the Federal Government.*

8 **SEC. 222. REMOTE SENSING FOR AGRICULTURAL AND RE-**
9 **SOURCE MANAGEMENT.**

10 *(a) FINDINGS.—The Congress finds that—*

11 *(1) the use of remote sensing data is potentially*
12 *a valuable resource to anticipate potential food, feed,*
13 *and fiber shortages or excesses, and provide this infor-*
14 *mation to the agricultural community in time to as-*
15 *sist farmers with planting decisions;*

16 *(2) remote sensing data can be useful to predict*
17 *impending famine problems and forest infestations in*
18 *time to allow remedial action;*

19 *(3) remote sensing data can inform the agricul-*
20 *tural community as to the condition of crops and the*
21 *land which sustains those crops;*

22 *(4) remote sensing data can be useful to allow*
23 *farmers to apply pesticides, nutrients, and water,*
24 *among other inputs, to farmlands in the exact*
25 *amounts necessary to maximize crop yield, thereby re-*

1 *ducing agricultural costs and minimizing potential*
2 *harm to the environment;*

3 *(5) remote sensing data can be valuable, when*
4 *received on a timely basis, in determining the needs*
5 *of additional plantings of a particular crop or a sub-*
6 *stitute crop; and*

7 *(6) the National Aeronautics and Space Admin-*
8 *istration, using the expertise of the Earth Observa-*
9 *tions Commercialization Applications Program, and*
10 *the Department of Agriculture should work in tandem*
11 *to aid farmers to obtain data conducive to sound ag-*
12 *ricultural management and greater crop yields.*

13 *(b) INFORMATION DEVELOPMENT.—The Secretary of*
14 *Agriculture and the Administrator of the National Aero-*
15 *navtics and Space Administration, maximizing private*
16 *funding and involvement, shall provide farmers and other*
17 *interested persons with timely information, through remote*
18 *sensing, on crop conditions, fertilization and irrigation*
19 *needs, pest infiltration, soil conditions, projected food, feed,*
20 *and fiber production, and any other information available*
21 *through remote sensing.*

22 *(c) ENHANCED REMOTE SENSING PROGRAM.—(1) The*
23 *Secretary of Agriculture and the Administrator of the Na-*
24 *tional Aeronautics and Space Administration shall jointly*
25 *evaluate the need for a radar imaging platform that could*

1 *enhance United States remote sensing capability by provid-*
2 *ing information and data relating to agricultural resources,*
3 *and which may have other commercial and research appli-*
4 *cations.*

5 (2) *In the event there is a finding of need for a plat-*
6 *form as set forth in paragraph (1), the Secretary of Agri-*
7 *culture and the Administrator of the National Aeronautics*
8 *and Space Administration shall jointly develop a proposal,*
9 *which maximizes private funding and involvement in the*
10 *launch and operation of such platform, and in the manage-*
11 *ment and dissemination of the data from such platform.*
12 *The Secretary and the Administrator shall jointly submit*
13 *the proposal, within 30 days of its development, to the Com-*
14 *mittee on Agriculture and the Committee on Science, Space,*
15 *and Technology of the House of Representatives, and to the*
16 *Committee on Agriculture, Nutrition, and Forestry and the*
17 *Committee on Commerce, Science, and Transportation of*
18 *the Senate.*

19 (d) *TRAINING.—The Secretary of Agriculture and the*
20 *Administrator of the National Aeronautics and Space Ad-*
21 *ministration shall jointly develop a proposal to inform*
22 *farmers and other prospective users concerning the use and*
23 *availability of remote sensing data.*

24 (e) *SUNSET.—The provisions of this section shall ex-*
25 *pire 5 years after the date of enactment of this Act.*

1 **SEC. 223. COORDINATION OF EDUCATION SUPPORT FOR**
2 **UNDERREPRESENTED GROUPS.**

3 *The Administrator shall coordinate with other Federal*
4 *agencies all National Aeronautics and Space Administra-*
5 *tion education activities to encourage the participation of*
6 *women, minorities who are underrepresented in science, en-*
7 *gineering, and mathematics, and persons with disabilities.*

8 **SEC. 224. SPACE EXPLORATION OPPORTUNITIES ASSESS-**
9 **MENT.**

10 (a) *NATIONAL ACADEMY OF SCIENCES CONTRACT.—*
11 *The Administrator shall, to the extent provided in advance*
12 *in appropriations Acts, enter into a contract with the Na-*
13 *tional Academy of Sciences for the conduct of the assessment*
14 *described in subsection (b).*

15 (b) *SPACE EXPLORATION OPPORTUNITIES ASSESS-*
16 *MENT.—The contract entered into under subsection (a) shall*
17 *provide for an assessment of methods for maximizing, based*
18 *on a variety of prospective funding levels, the quantity and*
19 *quality of opportunities for space exploration, both human*
20 *and robotic, using space vehicles and platforms available*
21 *or expected to be available. Such assessment shall focus on*
22 *the 5-year period after the date of enactment of this Act,*
23 *and on each of the two subsequent 5-year periods. Such as-*
24 *essment shall address opportunities in connection with ci-*
25 *vilian and military domestic, and foreign, space vehicles*
26 *and platforms, whether publicly or privately funded.*

1 (c) *REPORT TO CONGRESS.*—The Administrator shall,
2 within one year after the date of enactment of this Act, sub-
3 mit to Congress a report containing the results of the assess-
4 ment conducted under subsection (b).

5 **SEC. 225. CATALOGUE OF EARTH-THREATENING COMETS**
6 **AND ASTEROIDS.**

7 (a) *REQUIREMENT.*—To the extent practicable, the Na-
8 tional Aeronautics and Space Administration, in coordina-
9 tion with the Department of Defense and the space agencies
10 of other countries, shall identify and catalogue within 10
11 years the orbital characteristics of all comets and asteroids
12 that are greater than 1 kilometer in diameter and are in
13 an orbit around the sun that crosses the orbit of the Earth.

14 (b) *PROGRAM PLAN.*—By February 1, 1995, the Ad-
15 ministrator shall submit to the Congress a program plan,
16 including estimated budgetary requirements for fiscal years
17 1996 through 2000, to implement subsection (a).

18 **TITLE III—REVISIONS TO LAND**
19 **REMOTE SENSING POLICY**
20 **ACT OF 1992**

21 **SEC. 301. AMENDMENTS.**

22 The Land Remote Sensing Policy Act of 1992 (15
23 U.S.C. 5601 et seq.) is amended—

24 (1) by amending section 2(9) to read as follows:

1 “(9) Because Landsat data are particularly im-
2 portant for global environmental change research, the
3 program should be managed by an integrated team
4 consisting of the National Aeronautics and Space Ad-
5 ministration and the National Oceanic and Atmos-
6 pheric Administration and coordinated by the Office
7 of Science and Technology Policy.”;

8 (2) in sections 3(6)(A), 101 (a) and (b), 103(b),
9 and 504, by striking “Secretary of Defense” and in-
10 serting in lieu thereof “Secretary”;

11 (3) in section 3(6)(B), by striking “Department
12 of Defense” and inserting in lieu thereof “Department
13 of Commerce”;

14 (4) in section 101(b)(1), by striking “, with the
15 addition of a tracking and data relay satellite com-
16 munications capability”;

17 (5) in section 101(b)(2), by striking all after
18 “baseline funding profile” and inserting in lieu there-
19 of “for the development and operational life of
20 Landsat 7 that is mutually acceptable to the agencies
21 constituting the Landsat Program Management.”;

22 (6) in section 101(b), by inserting after para-
23 graph (4) the following:

24 “The Director of the Office of Science and Technology Pol-
25 icy shall, no later than October 1, 1994, transmit the man-

1 *agement plan to the Committee on Science, Space, and*
2 *Technology of the House of Representatives and the Com-*
3 *mittee on Commerce, Science, and Transportation of the*
4 *Senate.”;*

5 *(7) in sections 101(c)(3), 202(b)(1), 501(a), and*
6 *502(c)(7), by striking “section 506” and inserting in*
7 *lieu thereof “section 507”;*

8 *(8) in section 102(b)(1), by striking “by the ex-*
9 *pected end of the design life of Landsat 6” and insert-*
10 *ing in lieu thereof “by the predicted end of life of*
11 *Landsat 5, or as soon as practicable thereafter”;*

12 *(9) in section 103(a), by striking “section 105”*
13 *and inserting in lieu thereof “section 104”;*

14 *(10) by adding at the end of section 103 the fol-*
15 *lowing new subsection:*

16 *“(c) IMPLEMENTATION OF AGREEMENT.—If negotia-*
17 *tions under subsection (a) result in an agreement that the*
18 *Landsat Program Management determines generally*
19 *achieves the goals stated in subsection (a) (1) through (8),*
20 *the Landsat Program Management shall award an exten-*
21 *sion, until the practical demise of Landsat 4 or Landsat*
22 *5, whichever occurs later, of the existing contract with the*
23 *Landsat 6 contractor incorporating the terms of such*
24 *agreement.”;*

1 (11) by striking section 104 and redesignating
2 section 105 as section 104;

3 (12) in section 201(c)—

4 (A) by striking “120 days” and inserting in
5 lieu thereof “90 days”; and

6 (B) by amending the second sentence thereof
7 to read as follows: “If the Secretary determines
8 that the license requested by the applicant should
9 not be issued, the Secretary shall inform the ap-
10 plicant within such 90-day period of the reasons
11 for such determination and the specific actions
12 required of the applicant to obtain a license.”;

13 (13) in section 202(b)(6), by inserting “, other
14 than for the sale of data generated by the system in
15 accordance with the license, that” after “of any agree-
16 ment”;

17 (14) in section 204, by striking “may” and in-
18 serting in lieu thereof “shall”;

19 (15) by inserting at the end of title II the follow-
20 ing new section:

21 **“SEC. 206. NOTIFICATION.**

22 “(a) *LIMITATIONS ON LICENSEE.*—Within 30 days
23 after any determination by the Secretary to require a li-
24 censee to limit collection or distribution of data from a sys-
25 tem licensed pursuant to this title, the Secretary shall re-

1 port to the Congress the reasons for such determination, the
2 limitations imposed on the licensee, and the period during
3 which such limitations apply.

4 “(b) *TERMINATION, MODIFICATION, OR SUSPEN-*
5 *SION.*—Within 30 days after any action by the Secretary
6 to seek an order of injunction or other judicial determina-
7 tion pursuant to section 203(a)(2), the Secretary shall no-
8 tify the Congress of such action and provide the reasons
9 for such action.”;

10 (16) in section 302—

11 (A) by striking “(a) *GENERAL RULE.*—”;

12 and

13 (B) by striking subsection (b); and

14 (17) in section 507, by striking subsection (a)
15 and subsection (b)(1) and inserting in lieu thereof the
16 following:

17 “(a) *RESPONSIBILITY OF SECRETARY OF DEFENSE.*—

18 The Secretary shall consult with the Secretary of Defense
19 on all matters under this Act affecting national security.

20 Within 30 days after receiving a request from the Secretary,

21 the Secretary of Defense shall recommend any conditions

22 for a license issued under title II, consistent with this Act,

23 that the Secretary of Defense determines are needed to pro-

24 tect the national security of the United States. If no such

25 recommendations have been received by the Secretary with-

1 *in such 30-day period, the Secretary may deem activities*
2 *proposed in the license application to be consistent with the*
3 *protection of the national security of the United States.*

4 “(b) *RESPONSIBILITY OF SECRETARY OF STATE.—(1)*
5 *The Secretary shall consult with the Secretary of State on*
6 *all matters under this Act affecting international obliga-*
7 *tions of the United States. Within 30 days after receiving*
8 *a request from the Secretary, the Secretary of State shall*
9 *recommend any conditions for a license issued under title*
10 *II, consistent with this Act, that the Secretary of State de-*
11 *termines are needed to meet existing international obliga-*
12 *tions of the United States. If no such recommendations have*
13 *been received by the Secretary within such 30-day period,*
14 *the Secretary may deem activities proposed in the license*
15 *application to be consistent with existing international ob-*
16 *ligations of the United States.”.*

17 **TITLE IV—AERONAUTICAL**
18 **RESEARCH AND TECHNOLOGY**

19 **SEC. 401. FINDINGS.**

20 *The Congress finds that—*

21 (1) *the United States aeronautics industry has*
22 *provided a major contribution to the competitiveness*
23 *of the United States, and has accounted for over*
24 *\$80,000,000,000 in annual sales and over*
25 *\$20,000,000,000 in positive balance of trade;*

1 (2) *the international market share of the United*
2 *States aeronautics industry has steadily eroded due to*
3 *competition from foreign consortia that receive sub-*
4 *stantial direct subsidies from their governments;*

5 (3) *the United States aeronautics industry has*
6 *been severely impacted by the reductions in defense*
7 *spending, leading to reduced levels of research and de-*
8 *velopment investment by industry;*

9 (4) *the foreign policy of the United States has*
10 *included maintaining United States competitiveness*
11 *and technology leadership in areas of strategic inter-*
12 *est, such as aeronautics, but United States aero-*
13 *navics has not been addressed in United States for-*
14 *foreign policy with the same emphasis as United States*
15 *international space endeavors;*

16 (5) *no effective means have been developed by*
17 *which the National Aeronautics and Space Adminis-*
18 *tration can accurately measure the contribution of its*
19 *research toward achieving United States competitive-*
20 *ness and maintaining technological leadership; and*

21 (6) *maintaining experimental state-of-the-art fa-*
22 *ilities has been a key investment to retaining United*
23 *States competitiveness and technological leadership,*
24 *and these facilities have been heavily utilized by*

1 *United States industry in their research and develop-*
2 *ment programs.*

3 **SEC. 402. AERONAUTICS POLICY OF THE NATIONAL AERO-**
4 **NAUTICS AND SPACE ADMINISTRATION.**

5 *It is the policy of the United States that—*

6 *(1) improving the competitive capability of the*
7 *United States aeronautics industry shall be a fun-*
8 *damental goal of the aeronautical research and devel-*
9 *opment programs of the National Aeronautics and*
10 *Space Administration;*

11 *(2) the investment in aeronautics technology by*
12 *the National Aeronautics and Space Administration*
13 *shall be closely coordinated with United States*
14 *industry;*

15 *(3) the establishment of industry-led,*
16 *precompetitive consortia shall be encouraged to better*
17 *prioritize and coordinate the industry requirements*
18 *for advanced technologies and facilities;*

19 *(4) revitalizing national aeronautical facilities*
20 *shall be a major element of Federal investment in*
21 *aeronautical research and development; and*

22 *(5) industry and government cost-sharing for fa-*
23 *cilities construction and use shall be investigated to*
24 *achieve aeronautics research and technology goals*
25 *within a constrained Federal budget.*

1 **SEC. 403. AMENDMENTS TO THE NATIONAL AERONAUTICS**
2 **AND SPACE ACT OF 1958.**

3 (a) *TECHNICAL CORRECTION AMENDMENT.*—(1) *Sec-*
4 *tion 214 of the National Aeronautics and Space Adminis-*
5 *tration Authorization Act, Fiscal Year 1989 is amended by*
6 *striking “(c)” both places it appears and inserting in lieu*
7 *thereof “(d)”.*

8 (2) *The amendment made by paragraph (1) shall be*
9 *effective as of the date of enactment of the Act referred to*
10 *in paragraph (1).*

11 (b) *OBJECTIVES.*—*Section 102(d) of the National Aer-*
12 *onautics and Space Act of 1958 (42 U.S.C. 2451(d)) is*
13 *amended—*

14 (1) *by striking “and” at the end of paragraph*
15 *(8);*

16 (2) *by striking the period at the end of para-*
17 *graph (9) and inserting in lieu thereof a semicolon;*
18 *and*

19 (3) *by adding at the end the following new para-*
20 *graphs:*

21 “(10) *The economic growth, competitiveness, and*
22 *productivity of the Nation through close coordination*
23 *with industry in the conduct of innovative aero-*
24 *onautics technology validation and technology transfer*
25 *programs; and*

1 “(11) *The improvement of the safety, capacity,*
2 *and efficiency of the United States air transportation*
3 *system through close coordination among the agencies*
4 *of the Federal Government.”.*

5 **SEC. 404. AERONAUTICAL BASIC RESEARCH INVESTMENT**

6 **PLAN.**

7 (a) *PLAN.—The Administrator shall develop an aero-*
8 *nautical basic research investment plan which—*

9 (1) *describes the aeronautical basic research un-*
10 *derway within the United States, including a review*
11 *of the status of United States basic research in criti-*
12 *cal aeronautics disciplines including—*

13 (A) *aerodynamics;*

14 (B) *propulsion;*

15 (C) *materials and structures;*

16 (D) *controls, guidance, and human factors;*

17 and

18 (E) *flight systems;*

19 (2) *establishes goals and objectives for United*
20 *States aeronautical basic research to advance the criti-*
21 *cal disciplines required by United States industry*
22 *for such research;*

23 (3) *identifies the priorities for aeronautical basic*
24 *research required by industry to advance United*
25 *States long-term competitiveness;*

1 (4) describes the anticipated impact of aero-
2 nautical basic research on United States long-term
3 competitiveness;

4 (5) encourages the transfer of Government-devel-
5 oped technologies to the private sector to promote eco-
6 nomic strength and competitiveness; and

7 (6) identifies opportunities for aeronautical basic
8 research to be performed by minority-owned and
9 women-owned businesses within the aeronautical
10 basic research industry.

11 The Administrator shall annually update the plan, includ-
12 ing a report on progress in achieving the goals and objec-
13 tives identified pursuant to paragraph (2).

14 (b) *INDEPENDENT EVALUATION.*—The Administrator
15 shall submit the plan developed under subsection (a), and
16 all subsequent annual updates thereto, along with appro-
17 priate programmatic technical, schedule, and financial in-
18 formation, to the National Research Council of the National
19 Academy of Sciences for an independent evaluation of such
20 plan.

21 (c) *TRANSMITTAL TO CONGRESS.*—The Administrator
22 shall, along with the first annual budget request of the
23 President occurring more than 1 year after the date of en-
24 actment of this Act, transmit to the Congress the plan devel-
25 oped under subsection (a) and the results of the independent

1 review conducted pursuant to subsection (b). Subsequent
2 annual updates to the plan and independent reviews thereof
3 shall be transmitted to the Congress along with subsequent
4 annual budget requests of the President.

5 **SEC. 405. ROLE OF PROCUREMENT IN TECHNOLOGY IN-**
6 **VESTMENT.**

7 *The Administrator, in carrying out aeronautical re-*
8 *search and technology procurement, shall—*

9 *(1) promote the advancement of state-of-the-art*
10 *research and technologies;*

11 *(2) assess and procure, where appropriate, com-*
12 *mercially available technologies;*

13 *(3) where appropriate, use performance speci-*
14 *fications in procuring technologies; and*

15 *(4) reduce the paperwork requirements associated*
16 *with procurement.*

17 **SEC. 406. AERONAUTICAL TEST FACILITIES INITIATIVE.**

18 *(a) STRATEGY.—The President shall establish a strat-*
19 *egy to coordinate with domestic aeronautical companies to*
20 *establish the requirements of such companies and the Fed-*
21 *eral Government for aeronautical test facilities. The strat-*
22 *egy shall—*

23 *(1) define the capabilities of aeronautical test fa-*
24 *cilities required by domestic aeronautical companies*
25 *and the Federal Government over the next 30 years;*

1 (2) *research on advanced engine materials, en-*
2 *gine concepts, and testing of propulsion systems or*
3 *components of the high-speed civil transport research*
4 *program;*

5 (3) *advanced general aviation research;*

6 (4) *advanced rotorcraft research; and*

7 (5) *advanced hypersonic aeronautical research.*

8 (b) *CONTRACTS AND GRANTS.*—*Contracts and grants*
9 *entered into under the program established under subsection*
10 *(a) shall be administered using procedures developed jointly*
11 *by the Administrator and the heads of the other Federal*
12 *agencies involved in the program. These procedures should*
13 *include an integrated acquisition policy for contract and*
14 *grant requirements and for technical data rights that are*
15 *not an impediment to joint programs among the National*
16 *Aeronautics and Space Administration, the other Federal*
17 *agencies involved in the program, and industry.*

18 (c) *ELEMENTS OF PROGRAM.*—*The program estab-*
19 *lished under subsection (a) shall include—*

20 (1) *selected programs that jointly enhance public*
21 *and private aeronautical technology development;*

22 (2) *an opportunity for private contractors to be*
23 *involved in such technology research and development;*
24 *and*

1 (3) *the transfer of Government-developed tech-*
2 *nologies to the private sector to promote economic*
3 *strength and competitiveness.*

4 **SEC. 408. HYPERSONIC RESEARCH INITIATIVE.**

5 *The Administrator shall conduct a study, through an*
6 *organization not a part of the National Aeronautics and*
7 *Space Administration, of strategies that would optimize the*
8 *Hypersonic System Technology Program by integrating*
9 *with the rocket-based hypersonic fight test experiments the*
10 *necessary development program which would achieve a sin-*
11 *gle-stage hypersonic research vehicle capable of Mach 15 or*
12 *greater, in the shortest possible time frame. The objective*
13 *of a program developed under the strategies identified*
14 *through such study would be the development of a single*
15 *stage to orbit air breathing aircraft. The Administrator*
16 *shall report the results of the study to Congress no later*
17 *than 6 months after the date of enactment of this Act.*

HR 4489 RH—2

HR 4489 RH—3

HR 4489 RH—4

HR 4489 RH—5

HR 4489 RH—6