

103^D CONGRESS
2^D SESSION

H. R. 4489

AN ACT

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,*

3 **SECTION 1. SHORT TITLE.**

4 This Act may be cited as the “National Aeronautics
5 and Space Administration Authorization and Space Policy
6 Act, Fiscal Year 1995”.

1 **SEC. 2. FINDINGS.**

2 The Congress finds that—

3 (1) the National Aeronautics and Space Admin-
4 istration will require a stable budget, adjusted for
5 inflation, in order to carry out the initiatives now
6 planned in human space flight and science, aero-
7 nautics, and technology;

8 (2) cooperation in space should continue to be
9 a major element of the post-cold war foreign policy
10 agenda through a broad range of scientific and engi-
11 neering programs that have the potential to stabilize
12 the scientific and industrial base of the former So-
13 viet Union and encourage the transition toward po-
14 litical reform and a market-based economy;

15 (3) the National Aeronautics and Space Admin-
16 istration should aggressively pursue actions and re-
17 forms directed at reducing institutional costs, includ-
18 ing management restructuring, facility consolidation,
19 procurement reform, personnel base downsizing, and
20 convergence with other defense and private sector
21 systems; and

22 (4) in formulating a national space transpor-
23 tation policy, the National Aeronautics and Space
24 Administration should take the lead role in develop-
25 ing advanced space transportation technologies in-

1 cluding reusable space vehicles, single-stage-to-orbit
2 vehicles, and manned space systems.

3 **SEC. 3. DEFINITIONS.**

4 For purposes of this Act—

5 (1) the term “Administrator” means the Ad-
6 ministrator of the National Aeronautics and Space
7 Administration; and

8 (2) the term “institution of higher education”
9 has the meaning given such term in section 1201(a)
10 of the Higher Education Act of 1965 (20 U.S.C.
11 1141(a)).

12 **TITLE I—AUTHORIZATION OF**
13 **APPROPRIATIONS**
14 **Subtitle A—Authorizations**

15 **SEC. 101. AUTHORIZATIONS.**

16 (a) AUTHORIZATIONS.—There are authorized to the
17 National Aeronautics and Space Administration for
18 Human Space Flight, Science, Aeronautics, and Tech-
19 nology, Mission Support, and Inspector General, such
20 amounts as may be appropriated for fiscal year 1995.

21 (b) OPERATING PLAN.—(1) Not later than 60 days
22 after the later of the date of enactment of an Act making
23 appropriations to the National Aeronautics and Space Ad-
24 ministration for fiscal year 1995 or the date of enactment
25 of this Act, the Administrator shall submit to the Commit-

1 tee on Science, Space, and Technology of the House of
2 Representatives and the Committee on Commerce,
3 Science, and Transportation of the Senate an operating
4 plan that provides a detailed plan for obligating fiscal year
5 1995 funds.

6 (2) To the maximum extent practicable, and except
7 to the extent inconsistent with an appropriations Act, the
8 operating plan required under paragraph (1) shall reflect
9 the recommended authorizations set forth in Report No.
10 103–654 of the House of Representatives.

11 **SEC. 102. SPECIAL PROVISIONS AND LIMITATIONS.**

12 (a) GLOBAL OBSERVATIONS TO BENEFIT THE ENVI-
13 RONMENT.—Beginning in fiscal year 1996, amounts ap-
14 propriated for the Global Observations to Benefit the En-
15 vironment, or any other program established to perform
16 substantially the same functions, may be obligated only
17 to the extent that an equal or greater amount of non-Fed-
18 eral funding is provided for such program.

19 (b) SMALL SPACECRAFT TECHNOLOGY INITIATIVE.—
20 No funds authorized to be appropriated under this Act
21 may be obligated for the Small Spacecraft Technology Ini-
22 tiative—

23 (1) to duplicate private sector activities or to
24 fund any activities that a private sector entity is
25 proposing to carry out for commercial purposes; or

1 (2) for projects that are initiated after the date
2 of enactment of this Act unless such projects require
3 cost-sharing by industry at levels consistent with
4 comparable joint Government-industry advanced
5 technology development programs.

6 (c) SCIENTIFIC COOPERATION WITH RUSSIA.—

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

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

20 (d) VISITORS CENTER.—To the extent provided in
21 advance in appropriations Acts, all unobligated funds
22 available to the Administrator from appropriations for fis-
23 cal years before fiscal year 1995, but not to exceed
24 \$5,000,000, may be obligated for the establishment of a
25 Visitor Center for the Lewis Research Center, if at least—

- 1 (1) an equal amount of funding;
 - 2 (2) in-kind resources of equivalent value; or
 - 3 (3) a combination thereof,
- 4 are provided for such purpose from non-Federal sources.

5 **Subtitle B—Limitations and** 6 **Special Authority**

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

8 (a) AUTHORIZED USES.—Funds appropriated pursu-
9 ant to subtitle A for purposes other than—

- 10 (1) construction of facilities;
- 11 (2) research and program management, exclud-
12 ing research operations support; and
- 13 (3) Inspector General,

14 may be used for the construction of new facilities and ad-
15 ditions to, repair of, rehabilitation of, or modification of
16 existing facilities at any location in support of the pur-
17 poses for which such funds are authorized.

18 (b) LIMITATION.—None of the funds used pursuant
19 to subsection (a) may be expended for a project, the esti-
20 mated cost of which to the National Aeronautics and
21 Space Administration, including collateral equipment, ex-
22 ceeds \$500,000, until 30 days have passed after the Ad-
23 ministrator has notified the Committee on Science, Space,
24 and Technology of the House of Representatives and the
25 Committee on Commerce, Science, and Transportation of

1 the Senate of the nature, location, and estimated cost to
2 the National Aeronautics and Space Administration of
3 such project.

4 (c) TITLE TO FACILITIES.—If funds are used pursu-
5 ant to subsection (a) for grants to institutions of higher
6 education, or to nonprofit organizations whose primary
7 purpose is the conduct of scientific research, for purchase
8 or construction of additional research facilities, title to
9 such facilities shall be vested in the United States unless
10 the Administrator determines that the national program
11 of aeronautical and space activities will best be served by
12 vesting title in the grantee institution or organization.
13 Each such grant shall be made under such conditions as
14 the Administrator shall determine to be required to ensure
15 that the United States will receive therefrom benefits ade-
16 quate to justify the making of that grant.

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

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

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

23 (a) IN GENERAL.—Amounts appropriated pursuant
24 to subtitle A for a construction of facilities project—

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
4 meet unusual cost variations, after the expiration of
5 15 days following a report on the circumstances of
6 such action by the Administrator to the Committee
7 on Science, Space, and Technology of the House of
8 Representatives and the Committee on Commerce,
9 Science, and Transportation of the Senate.

10 (b) SPECIAL RULE.—Where the Administrator deter-
11 mines that new developments in the national program of
12 aeronautical and space activities have occurred; and that
13 such developments require the use of additional funds for
14 the purposes of construction, expansion, or modification
15 of facilities at any location; and that deferral of such ac-
16 tion until the enactment of the next National Aeronautics
17 and Space Administration Authorization Act would be in-
18 consistent with the interest of the Nation in aeronautical
19 and space activities, the Administrator may use for such
20 purposes up to \$10,000,000 of the amounts appropriated
21 pursuant to subtitle A for construction of facilities pur-
22 poses. No such funds may be obligated until a period of
23 30 days has passed after the Administrator has transmit-
24 ted to the Committee on Commerce, Science, and Trans-
25 portation of the Senate and the Committee on Science,

1 Space, and Technology of the House of Representatives
2 a written report describing the nature of the construction,
3 its costs, and the reasons therefor.

4 **SEC. 114. CONSIDERATION BY COMMITTEES.**

5 Notwithstanding any other provision of this Act—

6 (1) no amount appropriated to the National
7 Aeronautics and Space Administration may be used
8 for any program for which the President's annual
9 budget request included a request for funding, but
10 for which the Congress denied or did not provide
11 funding; and

12 (2) no amount appropriated to the National
13 Aeronautics and Space Administration may be used
14 for any program which has not been presented to
15 the Congress in the President's annual budget re-
16 quest or the supporting and ancillary documents
17 thereto,

18 unless a period of 30 days has passed after the receipt
19 by the Committee on Science, Space, and Technology of
20 the House of Representatives and the Committee on Com-
21 merce, Science, and Transportation of the Senate of notice
22 given by the Administrator containing a full and complete
23 statement of the action proposed to be taken and the facts
24 and circumstances relied upon in support of such proposed
25 action. The National Aeronautics and Space Administra-

1 tion shall keep 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 fully and currently informed with respect to all ac-
5 tivities and responsibilities within the jurisdiction of those
6 committees. Except as otherwise provided by law, any
7 Federal department, agency, or independent establishment
8 shall furnish any information requested by either commit-
9 tee relating to any such activity or responsibility.

10 **SEC. 115. USE OF FUNDS FOR SCIENTIFIC CONSULTATIONS**
11 **OR EXTRAORDINARY EXPENSES.**

12 Funds appropriated pursuant to subtitle A for Mis-
13 sion Support may be used, but not to exceed \$35,000, for
14 scientific consultations or extraordinary expenses upon the
15 authority of the Administrator.

16 **SEC. 116. VOLUNTARY SEPARATION INCENTIVES.**

17 The Administrator shall, to the maximum extent
18 practicable, make voluntary separation incentive payments
19 pursuant to the Federal Workforce Restructuring Act of
20 1994 (Public Law 103-226) to employees of the National
21 Aeronautics and Space Administration from funds appro-
22 priated for fiscal year 1995 and available for such pay-
23 ments.

1 **SEC. 117. LIMITATION ON TRANSFERS TO RUSSIA.**

2 (a) LIMITATION.—No funds authorized to be appro-
3 priated to the National Aeronautics and Space Adminis-
4 tration for fiscal year 1995 may be paid or otherwise
5 transferred to Russia unless—

6 (1) the payment or transfer is made in ex-
7 change for goods or services that have been provided
8 to the National Aeronautics and Space Administra-
9 tion in accordance with a written agreement between
10 the National Aeronautics and Space Administration
11 and Russia;

12 (2) the Government of the Russian Federation
13 agrees to provide a monthly report to the National
14 Aeronautics and Space Administration during the
15 term of such written agreement, that fully accounts
16 for the disposition of the funds paid or transferred,
17 including information with respect to the preceding
18 month on—

19 (A) the amount of the funds received, and
20 the date of receipt;

21 (B) the amount of the funds converted
22 from United States currency, the currency into
23 which the funds have been converted, and the
24 date and rate of conversion;

25 (C) the amount of non-United States cur-
26 rency, and of United States currency, that is

1 disbursed to any contractor or subcontractor,
2 the identity of such contractor or subcontractor,
3 and the date of disbursement; and

4 (D) the balance of the funds not disbursed
5 as of the date of the report;

6 (3) Russia has provided all monthly reports
7 with respect to which an agreement was made pur-
8 suant to paragraph (2); and

9 (4) the President, before such payment or
10 transfer and annually upon submission of the Presi-
11 dent's budget request for fiscal years after fiscal
12 year 1995, has certified to the Congress that—

13 (A) the presence of any troops of the Rus-
14 sian Federation or the Commonwealth of Inde-
15 pendent States; and

16 (B) any action by the Russian Federation
17 or the Commonwealth of Independent States,
18 in Estonia, Latvia, Lithuania, or any other inde-
19 pendent state of the former Soviet Union do not vio-
20 late the sovereignty of those independent states.

21 (b) DEFINITION.—For purposes of this section, the
22 term “Russia” means the Government of the Russian
23 Federation, the Russian Space Agency, or any agency or
24 instrumentality of the Government of the Russian Federa-
25 tion or the Russian Space Agency.

1 **SEC. 118. SPACE STATION SPENDING CAP.**

2 The total amount of spending by the National Aero-
3 nautics Space Administration for the space station shall
4 not exceed \$2,120,900,000 for fiscal year 1995. The limi-
5 tation in this section shall not apply to amounts provided
6 for payments to Russia for phase I of the International
7 Space Station program.

8 **SEC. 119. CONSORTIUM FOR INTERNATIONAL EARTH**
9 **SCIENCE INFORMATION NETWORK BUILDING.**

10 The Consortium for International Earth Science In-
11 formation Network may not obligate more than
12 \$27,000,000 for the construction of a new building. Such
13 funds may not be obligated until 90 days after the comple-
14 tion of a building prospectus by the General Services Ad-
15 ministration.

16 **SEC. 120. LIMITATION ON APPROPRIATIONS.**

17 Notwithstanding any other provision of this Act, no
18 funds are authorized to be appropriated for carrying out
19 the programs for which funds are authorized by this Act
20 for any fiscal year after fiscal year 1995.

21 **TITLE II—MISCELLANEOUS**
22 **PROVISIONS**

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

24 (a) AMENDMENTS.—Chapter 701 of title 49, United
25 States Code, is amended—

26 (1) in the table of sections—

1 (A) by amending the item relating to sec-
2 tion 70104 to read as follows:

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

3 (B) by amending the item relating to sec-
4 tion 70108 to read as follows:

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

5 (C) by amending the item relating to sec-
6 tion 70109 to read as follows:

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

7 and

8 (D) by adding at the end the following new
9 item:

“Sec. 70120. Report to Congress.”;

10 (2) in section 70102—

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

13 (B) by redesignating paragraphs (10)
14 through (12) as paragraphs (12) through (14),
15 respectively; and

16 (C) by inserting after paragraph (9) the
17 following new paragraphs:

18 “(10) ‘reenter’ and ‘reentry’ mean to return
19 purposefully, or attempt to return, a reentry vehicle
20 and payload, if any, from Earth orbit or outer space
21 to Earth.

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

4 (3) in section 70104—

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

7 **“§ 70104. Restrictions on launches, operations, and**
8 **reentries”;**

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

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

14 (D) in subsection (b)—

15 (i) by striking “launch license” and
16 inserting in lieu thereof “license”;

17 (ii) by inserting “or reenter” after
18 “may launch”; and

19 (iii) by inserting “or reentering” after
20 “related to launching”; and

21 (E) in subsection (c)—

22 (i) by amending the subsection head-
23 ing to read as follows: “PREVENTING
24 LAUNCHES OR REENTRIES.—”;

1 (ii) by inserting “or reentry” after
2 “prevent the launch”; and

3 (iii) by inserting “or reentry” after
4 “decides the launch”;

5 (4) in section 70105—

6 (A) by inserting “, or reentry of a reentry
7 vehicle,” after “operation of a launch site” in
8 subsection (b)(1); and

9 (B) by striking “or operation” and insert-
10 ing in lieu thereof “, operation, or reentry” in
11 subsection (b)(2)(A);

12 (5) in section 70106(a)—

13 (A) by inserting “or reentry site” after
14 “observer at a launch site”; and

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

17 (6) in section 70108—

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

20 **“§ 70108. Prohibition, suspension, and end of**
21 **launches, operation of launch sites, and**
22 **reentries”;**

23 and

24 (B) in subsection (a)—

1 (i) by inserting “, or reentry of a re-
2 entry vehicle,” after “operation of a launch
3 site”; and

4 (ii) by inserting “or reentry” after
5 “launch or operation”;

6 (7) in section 70109—

7 (A) by amending the section designation
8 and heading to read as follows:

9 **“§ 70109. Preemption of scheduled launches or reen-**
10 **tries”;**

11 (B) in subsection (a)—

12 (i) by inserting “or reentry” after
13 “ensure that a launch”;

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

16 (iii) by inserting “or reentry date
17 commitment” after “launch date commit-
18 ment”;

19 (iv) by inserting “or reentry” after
20 “obtained for a launch”;

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

23 (vi) by inserting “, or services related
24 to a reentry,” after “amount for launch
25 services”; and

1 (vii) by inserting “or reentry” after
2 “the scheduled launch”; and

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

5 (8) in section 70110—

6 (A) by inserting “or reentry” after “pre-
7 vent the launch” in subsection (a)(2); and

8 (B) by inserting “, or reentry of a reentry
9 vehicle,” after “operation of a launch site” in
10 subsection (a)(3)(B);

11 (9) in section 70112—

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

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

16 (C) by inserting “or a reentry” after
17 “launch services” each place it appears in sub-
18 section (b);

19 (D) by inserting “OR REENTRIES” after
20 “LAUNCHES” in the heading for subsection (e);
21 and

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

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

4 (11) in section 70115(b)(1)(D)(i)—

5 (A) by inserting “reentry site,” after
6 “launch site,”; and

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

9 (12) in section 70117—

10 (A) by inserting “or reenter a reentry vehi-
11 cle” after “operate a launch site” in subsection
12 (a);

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

15 (C) in subsection (f)—

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

18 (ii) by inserting “, reentry vehicle,”
19 after “A launch vehicle”;

20 (iii) by inserting “or reentered” after
21 “that is launched”; and

22 (iv) by inserting “or reentry” after
23 “the launch”; and

24 (D) in subsection (g)—

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

4 (ii) by inserting “reentry,” after
5 “launch,” in paragraph (2);

6 (13) in section 70119, by inserting the follow-
7 ing after paragraph (2):

8 “There are authorized to the Secretary of Transportation
9 such amounts as may be appropriated to carry out this
10 chapter for fiscal year 1995.”; and

11 (14) by adding at the end the following new
12 section:

13 **“§ 70120. Report to Congress**

14 “The Secretary of Transportation shall submit to
15 Congress an annual report to accompany the President’s
16 budget request that—

17 “(1) describes all activities undertaken under
18 this chapter, including a description of the process
19 for the application for and approval of licenses under
20 this chapter and recommendations for legislation
21 that may further commercial launches and reentries;
22 and

23 “(2) reviews the performance of the regulatory
24 activities and the effectiveness of the Office of Com-
25 mercial Space Transportation.”.

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

3 (A) in subsection (a), by striking “receiving an
4 application” both places it appears and inserting in
5 lieu thereof “accepting an application in accordance
6 with subsection (b)(2)(D)”;

7 (B) by striking “and” at the end of subsection
8 (b)(2)(B);

9 (C) by striking the period at the end of sub-
10 section (b)(2)(C) and inserting in lieu thereof “;
11 and”; and

12 (D) by adding at the end of subsection (b)(2)
13 the following new subparagraph:

14 “(D) regulations establishing criteria for ac-
15 cepting an application for a license under this chap-
16 ter.”.

17 (2) The amendment made by paragraph (1)(A) shall
18 take effect upon the effective date of final regulations is-
19 sued pursuant to section 70105(b)(2)(D) of title 49, Unit-
20 ed States Code, as added by paragraph (1)(D) of this sub-
21 section.

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

23 There are authorized to the Secretary of Commerce
24 such amounts as may be appropriated for the activities
25 of the Office of Space Commerce for fiscal year 1995.

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

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

8 (b) LIMITATIONS.—This section shall apply only to
9 procurements made for which—

10 (1) amounts are authorized by this Act to be
11 made available; and

12 (2) solicitations for bids are issued after the
13 date of enactment of this Act.

14 (c) INAPPLICABILITY IN CASE OF VIOLATION OF
15 INTERNATIONAL AGREEMENT.—This section shall not
16 apply to the extent that the United States Trade Rep-
17 resentative determines that a procurement described in
18 subsection (b) would be in violation of the General Agree-
19 ment on Tariffs and Trade or an international agreement
20 to which the United States is a party.

21 (d) PURCHASE OF AMERICAN MADE EQUIPMENT
22 AND PRODUCTS.—

23 (1) SENSE OF CONGRESS.—It is the sense of
24 Congress that any recipient of a grant under this
25 Act, or under any amendment made by this Act,
26 should purchase, when available and cost-effective,

1 American made equipment and products when ex-
2 pending grant monies.

3 (2) NOTICE TO RECIPIENTS OF ASSISTANCE.—

4 In allocating grants under this Act, or under any
5 amendment made by this Act, the Secretary shall
6 provide to each recipient a notice describing the
7 statement made in paragraph (1) by the Congress.

8 **SEC. 204. REQUIREMENT FOR INDEPENDENT COST**
9 **ANALYSIS.**

10 The Chief Financial Officer for the National Aero-
11 nautics and Space Administration shall be responsible for
12 conducting independent cost analyses of all new projects
13 estimated to cost more than \$5,000,000 and shall report
14 the results annually to Congress at the time of the submis-
15 sion of the President's budget request. In developing cost
16 accounting and reporting standards for carrying out this
17 section, the Chief Financial Officer shall, to the extent
18 practicable and consistent with other laws, solicit the ad-
19 vice of expertise outside of the National Aeronautics and
20 Space Administration.

21 **SEC. 205. GLOBAL CHANGE DATA AND INFORMATION**
22 **SYSTEM.**

23 Title I of the Global Change Research Act of 1990
24 (15 U.S.C. 2931 et seq.) is amended by adding at the end
25 the following new section:

1 **“SEC. 109. GLOBAL CHANGE DATA AND INFORMATION**
2 **SYSTEM.**

3 “(a) The National Aeronautics and Space Adminis-
4 tration, in coordination with other agencies that belong to
5 the Committee established under section 102, shall estab-
6 lish the requirements and architecture for, design, and de-
7 velop a Global Change Data and Information System that
8 shall serve as the system to process, archive, and distrib-
9 ute data generated by the Global Change Research Pro-
10 gram.

11 “(b) The National Aeronautics and Space Adminis-
12 tration shall design the Global Change Data and Informa-
13 tion System—

14 “(1) so that other Federal agencies may con-
15 nect data centers operated by such agencies to such
16 System; and

17 “(2) so as to minimize, to the extent prac-
18 ticable, the cost of connecting such data centers.

19 “(c) Each agency involved in the Global Change Re-
20 search Program shall retain the responsibility to establish
21 and operate Global Change Data and Information System
22 data centers to process, archive, and distribute data gen-
23 erated by such agency’s programs. Agencies may agree to
24 assume the responsibility for processing, archiving, or dis-
25 tributing data generated by other agencies.”.

1 **SEC. 206. ACCESS TO CLASSIFIED DATA FOR GLOBAL**
2 **CHANGE RESEARCH.**

3 The Committee on Environment and Natural Re-
4 sources shall develop and submit to the Congress within
5 one year after the date of enactment of this Act a plan
6 for providing access to data from classified archives and
7 systems for global change research. The plan shall—

8 (1) determine whether the Global Change Data
9 and Information System or other means should be
10 used to provide access to such data for the scientific
11 community; and

12 (2) identify what agencies should be responsible
13 for particular parts of such data and any data cen-
14 ters needed to process, archive, and distribute such
15 data.

16 **SEC. 207. NATIONAL AERONAUTICS AND SPACE ACT OF 1958**
17 **AMENDMENTS.**

18 (a) REPORTS TO THE CONGRESS.—Section 206(a) of
19 the National Aeronautics and Space Act of 1958 (42
20 U.S.C. 2476(a)) is amended—

21 (1) by striking “January” and inserting in lieu
22 thereof “May”; and

23 (2) by striking “calendar” and inserting in lieu
24 thereof “fiscal”.

1 (b) DISCLOSURE OF TECHNICAL DATA.—Section 303
2 of the National Aeronautics and Space Act of 1958 (42
3 U.S.C. 2454) is amended—

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

6 (2) by adding at the end the following new sub-
7 section:

8 “(c)(1) The Administration may delay for a period
9 not to exceed 5 years the unrestricted public disclosure
10 of technical data in the possession of, or under the control
11 of, the Administration that has been generated in the per-
12 formance of experimental, developmental, or research ac-
13 tivities or programs funded jointly by the Administration
14 and the private sector.

15 “(2) The Administrator shall issue regulations to
16 carry out this subsection. Paragraph (1) shall not take ef-
17 fect until such regulations are issued.

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

20 “(A) guidelines for a determination of whether
21 data is technical data within the meaning of this
22 subsection;

23 “(B) a requirement that a determination de-
24 scribed in subparagraph (A) that particular data is
25 technical data shall be reported to the Committee on

1 Science, Space, and Technology of the House of
2 Representatives and the Committee on Commerce,
3 Science, and Transportation of the Senate;

4 “(C) provisions to ensure that technical data is
5 available for dissemination within the United States
6 to United States persons and entities in furtherance
7 of the objective of maintaining leadership or com-
8 petitiveness in civil and governmental aeronautical
9 and space activities by the United States industrial
10 base; and

11 “(D) a specification of the period or periods for
12 which the delay in unrestricted public disclosure of
13 technical data is to apply to various categories of
14 such data, and the restrictions on disclosure of such
15 data during such period or periods, including a re-
16 quirement that the maximum 5-year protection
17 under this subsection shall not be provided unless at
18 least 50 percent of the funding for the activities or
19 programs is provided by the private sector.

20 “(4) Along with the initial publication of proposed
21 regulations under paragraph (2), the Administrator shall
22 include a list of those experimental, developmental, or re-
23 search activities or programs conducted by, or funded in
24 whole or in part by, the Administration that may result
25 in products or processes of significant value in maintain-

1 ing leadership or competitiveness in civil and governmental
2 aeronautical and space activities by the United States in-
3 dustrial base. Such list shall be updated biannually.

4 “(5) For purposes of this subsection, the term ‘tech-
5 nical data’ means any recorded information, including
6 computer software, that is or may be directly applicable
7 to the design, engineering, development, production, man-
8 ufacture, or operation of products or processes that may
9 have significant value in maintaining leadership or com-
10 petitiveness in civil and governmental aeronautical and
11 space activities by the United States industrial base.”.

12 **SEC. 208. COMPARATIVE ANALYSIS OF UNITED STATES AND**
13 **FOREIGN EXPENDABLE SPACE LAUNCH SYS-**
14 **TEMS.**

15 The National Aeronautics and Space Administration
16 shall conduct a comprehensive study of the differences be-
17 tween existing United States and foreign expendable space
18 launch vehicles. This study shall determine specific dif-
19 ferences in the design, manufacture, processing, and over-
20 all management and infrastructure of current United
21 States and foreign expendable space launch vehicles. The
22 study shall also determine the approximate effect of these
23 differences on the relative cost, reliability, and operational
24 efficiency of such space launch systems. This study shall
25 be conducted in consultation with the Department of De-

1 fense and, as appropriate, other Federal agencies, United
2 States industries, and institutions of higher education.
3 The results of this study shall be submitted to the Con-
4 gress no later than October 1, 1995.

5 **SEC. 209. UNIVERSITY INNOVATIVE RESEARCH PROGRAM**
6 **STUDY.**

7 (a) FINDINGS.—The Congress finds that—

8 (1) institutions of higher education offer a sig-
9 nificant resource for the conduct of innovative sci-
10 entific and technological research to advance the Na-
11 tional Aeronautics and Space Administration’s mis-
12 sion;

13 (2) the National Aeronautics and Space Admin-
14 istration should act to broaden the foundation of its
15 research base by increasing the direct involvement of
16 research laboratories of institutions of higher edu-
17 cation in the development of technology for space
18 science;

19 (3) the National Aeronautics and Space Admin-
20 istration should commit to strengthening research
21 programs in technology of institutions of higher edu-
22 cation beyond contracting with institutions of higher
23 education for services in support of specific pro-
24 grams; and

1 (4) the National Aeronautics and Space Admin-
2 istration should develop mechanisms to foster inno-
3 vative technological research at institutions of higher
4 education that do not participate in the University
5 Space Engineering Research Centers.

6 (b) STUDY.—The Administrator shall undertake a
7 study of the feasibility and potential implementation of a
8 University Innovative Research Program which—

9 (1) promotes technological innovation in the
10 United States by using the Nation’s institutions of
11 higher education to help meet the National Aero-
12 nautics and Space Administration’s research and de-
13 velopment needs, by stimulating technology transfer
14 between institutions of higher education and indus-
15 try, and by encouraging participation by minority
16 and disadvantaged persons in technological innova-
17 tion;

18 (2) is modeled on the Small Business Innova-
19 tion Research Program;

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

23 (4) derives funding from the Space Research
24 and Technology program.

1 (c) COMPLETION.—The study required by subsection
2 (b) shall be completed and its results submitted to the
3 Congress within one year after the date of enactment of
4 this Act.

5 (d) ADVICE.—In carrying out the study required by
6 subsection (b), the Administrator shall seek the advice of
7 the National Aeronautics and Space Administration Advi-
8 sory Council, the National Research Council's Aeronautics
9 and Space Engineering Board and Space Studies Board,
10 and other organizations as appropriate.

11 **SEC. 210. GEOGRAPHICAL DISTRIBUTION.**

12 The National Aeronautics and Space Administration
13 shall give consideration to geographical distribution of its
14 research and development funds whenever feasible.

15 **SEC. 211. ADDITIONAL NATIONAL AERONAUTICS AND**
16 **SPACE ADMINISTRATION FACILITIES.**

17 (a) SELECTION IN DEPRESSED COMMUNITIES.—
18 When consistent with the goals of the National Aero-
19 nautics and Space Administration and cost-effective, the
20 Administrator shall select sites in depressed communities
21 for new programs or functions of the National Aeronautics
22 and Space Administration, unless those new programs or
23 functions are so closely related to programs or functions
24 carried out at an existing facility as to require being car-
25 ried out at that existing facility.

1 (b) DEFINITIONS.—For purposes of this section, the
2 term “depressed communities” means rural and urban
3 communities that are relatively depressed, in terms of age
4 of housing, extent of poverty, growth of per capita income,
5 extent of unemployment, job lag, or surplus labor.

6 **SEC. 212. RECIPROCIITY.**

7 (a) GENERAL RULE.—Except as provided in sub-
8 section (b), no contract or subcontract may be made with
9 funds authorized under this Act to a company organized
10 under the laws of a foreign country unless the Adminis-
11 trator finds that such country affords comparable oppor-
12 tunities to companies organized under the laws of the
13 United States.

14 (b) EXCEPTION.—(1) The Administrator may waive
15 the rule stated under subsection (a) if the products or
16 services required are not reasonably available from—

17 (A) companies organized under the laws of the
18 United States; or

19 (B) companies organized under the laws of a
20 foreign country which the Administrator finds af-
21 fords comparable opportunities to companies orga-
22 nized under the laws of the United States.

23 Any such waiver shall be reported to the Congress.

24 (2) Subsection (a) shall not apply to the extent that
25 to do so would violate the General Agreement on Tariffs

1 and Trade or any other international agreement to which
2 the United States is a party.

3 **SEC. 213. STUDY ON TDRSS AND COMMERCIAL SATELLITE**
4 **SYSTEM CONVERGENCE.**

5 (a) REQUIREMENT.—The Administrator shall con-
6 duct a study on the convergence of the National Aero-
7 nautics and Space Administration Tracking and Data
8 Relay Satellite System (TDRSS) with commercial commu-
9 nications satellite systems. The study shall assess whether
10 a converged system, from which the National Aeronautics
11 and Space Administration would buy tracking and data
12 relay services, could—

13 (1) satisfy the National Aeronautics and Space
14 Administration’s tracking and data relay require-
15 ments;

16 (2) reduce the National Aeronautics and Space
17 Administration’s expenses in satisfying tracking and
18 data relay requirements through maintenance and
19 operations of the TDRSS;

20 (3) be financed, developed, and operated by the
21 private sector;

22 (4) serve commercial communication needs;

23 (5) be established to satisfy the National Aero-
24 nautics and Space Administration’s requirements in

1 time to obviate the need to procure TDRSS space-
2 craft beyond the tenth flight; and

3 (6) encourage the growth of the commercial sat-
4 ellite communications market.

5 (b) CONSULTATION.—In conducting the study, the
6 Administrator shall consult with commercial satellite oper-
7 ators, including the International Telecommunications
8 Satellite Organization, other international satellite opera-
9 tors, and United States satellite operators, as appropriate,
10 and shall also consult with the Department of Defense
11 concerning its requirements for tracking and data relay
12 services.

13 (c) REPORT.—The Administrator shall report on the
14 study's findings and recommendations on feasibility of
15 convergence to the Committee on Science, Space, and
16 Technology of the House of Representatives and the Com-
17 mittee on Commerce, Science, and Transportation of the
18 Senate by February 15, 1995.

19 **SEC. 214. STUDY ON CONVERGENCE OF GEOSAT AND EOS**
20 **ALTIMETRY PROGRAMS.**

21 (a) REQUIREMENT.—The Administrator shall con-
22 duct a study on the convergence of the National Aero-
23 nautics and Space Administration Earth Observing Sys-
24 tem (EOS) Altimetry mission with the Navy Geosat Fol-
25 low-On program. The study shall assess whether a con-

1 verged system, which may involve minor modifications to
2 the Geosat Follow-On satellite, could—

3 (1) satisfy the needs of the Earth Observing
4 System program for altimetry data;

5 (2) reduce the National Aeronautics and Space
6 Administration's expenses in satisfying such needs;

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

9 (4) continue to meet the Navy's requirements
10 for altimetry data at no additional cost to the Navy.

11 (b) CONSULTATION.—In conducting the study, the
12 Administrator shall consult with the Navy and the sci-
13 entific community, as appropriate.

14 (c) REPORT.—The Administrator shall report on the
15 study's findings and recommendations on the feasibility
16 of convergence to the Committee on Science, Space, and
17 Technology of the House of Representatives and the Com-
18 mittee on Commerce, Science, and Transportation of the
19 Senate by February 15, 1995.

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

21 By February 1, 1995, the Administrator shall submit
22 a report to the Committee on Science, Space, and Tech-
23 nology of the House of Representatives and the Committee
24 on Commerce, Science, and Transportation of the Senate
25 that—

1 (1) specifies the minimum number of Space
2 Shuttle flights that would be required each fiscal
3 year from 1995 through 2004 to implement payload
4 and related activities provided for in the President's
5 fiscal year 1995 budget request and supporting and
6 ancillary documents thereto;

7 (2) outlines the Space Shuttle flight and pay-
8 load manifest that could be implemented for each of
9 the fiscal years 1995 through 1999 if the Space
10 Shuttle flight rate for each of those years were 8
11 missions, if the flight rate were 7 missions, and if
12 the flight rate were 6 missions;

13 (3) evaluates the extent to which various poten-
14 tial management consolidation initiatives could re-
15 duce the annual cost of the Space Shuttle program
16 while preserving quality and safety; and

17 (4) evaluates the extent to which various poten-
18 tial contract incentives could be used to reduce the
19 annual cost of the Space Shuttle program while pre-
20 serving quality and safety.

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

22 (a) FUNDING POLICY.—The Administrator may use,
23 and is encouraged to use, any funds appropriated for
24 Space Shuttle operations, but not needed for such pur-
25 poses because of a reduction in annual operating costs,

1 for an advanced launch technology program, including the
2 cost of technology development, flight demonstrators, and
3 procurement of operational flight hardware.

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

7 (1) clearly articulates the goals and objectives
8 of the program and the flight hardware it will
9 produce;

10 (2) describes the management structure and de-
11 velopment philosophy that will be used to implement
12 the program;

13 (3) outlines key milestones toward the achieve-
14 ment of the goals and objectives articulated under
15 paragraph (1);

16 (4) estimates the total cost that will have been
17 incurred upon completion of the program;

18 (5) defines the annual budgetary requirements
19 of the program for the next 5 years; and

20 (6) identifies the source or sources of funding
21 anticipated for the program for each of the next 5
22 years, including funds described in subsection (a).

23 **SEC. 217. LAND CONVEYANCE.**

24 The Administrator may accept the conveyance to the
25 United States of certain parcels of land from the cities

1 of Cleveland and Brook Park, Ohio, for the purpose of
2 establishing a Visitor Center for the Lewis Research Cen-
3 ter.

4 **SEC. 218. PROCUREMENT.**

5 (a) **PROCUREMENT DEMONSTRATION PROGRAM.**—

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

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

22 (3) **REQUIREMENT.**—At least 2 percent of
23 amounts appropriated pursuant to subtitle A for the
24 Office of Advanced Concepts and Technology shall
25 be used for innovative technology procurements that

1 are determined under paragraph (2) of this sub-
2 section to meet mission requirements.

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

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

12 (b) TECHNOLOGY PROCUREMENT INITIATIVE.—

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

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

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

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 con-
5 tractors of the National Aeronautics and Space
6 Administration to integrate commercially avail-
7 able technology in subsystem contracts on a
8 fixed-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 Admin-
12 istrator shall certify, by publication of a notice and
13 opportunity 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
21 a new lease for facilities to support National Aeronautics
22 and Space Administration programs unless the Adminis-
23 trator has certified to the Congress that the Administrator
24 has reviewed existing National Aeronautics and Space Ad-
25 ministration and other federally owned facilities, including

1 military facilities scheduled for closing or reduction, and
2 found 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
6 transmit to the Congress a report with a complete annual
7 accounting 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. Ex-
13 amples of such data include scientific data concerning the
14 elemental and mineralogical resources of the moon and the
15 planets, Earth environmental data obtained through re-
16 mote 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
21 of supporting the bid or fulfillment of the contract, shall
22 not 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 pro-
4 vider 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 in-
14 formation to the agricultural community in time to
15 assist farmers with planting decisions;

16 (2) remote sensing data can be useful to predict
17 impending famine problems and forest infestations
18 in 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

1 reducing 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 tan-
11 dem to aid farmers to obtain data conducive to
12 sound agricultural management and greater crop
13 yields.

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

23 (c) ENHANCED REMOTE SENSING PROGRAM.—(1)
24 The Secretary of Agriculture and the Administrator of the
25 National Aeronautics and Space Administration shall

1 jointly evaluate the need for a radar imaging platform that
2 could enhance United States remote sensing capability by
3 providing information and data relating to agricultural re-
4 sources, and which may have other commercial and re-
5 search applications.

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

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

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

3 **SEC. 223. COORDINATION OF EDUCATION SUPPORT FOR**
4 **UNDERREPRESENTED GROUPS.**

5 The Administrator shall coordinate with other Fed-
6 eral agencies all National Aeronautics and Space Adminis-
7 tration education activities to encourage the participation
8 of women, minorities who are underrepresented in science,
9 engineering, and mathematics, and persons with disabil-
10 ities.

11 **SEC. 224. SPACE EXPLORATION OPPORTUNITIES ASSESS-**
12 **MENT.**

13 (a) NATIONAL ACADEMY OF SCIENCES CONTRACT.—
14 The Administrator shall, to the extent provided in advance
15 in appropriations Acts, enter into a contract with the Na-
16 tional Academy of Sciences for the conduct of the assess-
17 ment described in subsection (b).

18 (b) SPACE EXPLORATION OPPORTUNITIES ASSESS-
19 MENT.—The contract entered into under subsection (a)
20 shall provide for an assessment of methods for maximiz-
21 ing, based on a variety of prospective funding levels, the
22 quantity and quality of opportunities for space explo-
23 ration, both human and robotic, using space vehicles and
24 platforms available or expected to be available. Such as-
25 sessment shall focus on the 5-year period after the date

1 of enactment of this Act, and on each of the two subse-
2 quent 5-year periods. Such assessment shall address op-
3 portunities in connection with civilian and military domes-
4 tic, and foreign, space vehicles and platforms, whether
5 publicly or privately funded.

6 (c) REPORT TO CONGRESS.—The Administrator
7 shall, within one year after the date of enactment of this
8 Act, submit to Congress a report containing the results
9 of the assessment conducted under subsection (b).

10 **SEC. 225. CATALOGUE OF EARTH-THREATENING COMETS**
11 **AND ASTEROIDS.**

12 (a) REQUIREMENT.—To the extent practicable, the
13 National Aeronautics and Space Administration, in coordi-
14 nation with the Department of Defense and the space
15 agencies of other countries, shall identify and catalogue
16 within 10 years the orbital characteristics of all comets
17 and asteroids that are greater than 1 kilometer in diame-
18 ter and are in an orbit around the sun that crosses the
19 orbit of the Earth.

20 (b) PROGRAM PLAN.—By February 1, 1995, the Ad-
21 ministrator shall submit to the Congress a program plan,
22 including estimated budgetary requirements for fiscal
23 years 1996 through 2000, to implement subsection (a).

1 **TITLE III—REVISIONS TO LAND**
2 **REMOTE SENSING POLICY**
3 **ACT OF 1992**

4 **SEC. 301. AMENDMENTS.**

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

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

8 “(9) Because Landsat data are particularly im-
9 portant for global environmental change research,
10 the program should be managed by an integrated
11 team consisting of the National Aeronautics and
12 Space Administration and the National Oceanic and
13 Atmospheric Administration and coordinated by the
14 Office of Science and Technology Policy.”;

15 (2) in sections 3(6)(A), 101 (a) and (b),
16 103(b), and 504, by striking “Secretary of Defense”
17 and inserting in lieu thereof “Secretary”;

18 (3) in section 3(6)(B), by striking “Department
19 of Defense” and inserting in lieu thereof “Depart-
20 ment of Commerce”;

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

24 (5) in section 101(b)(2), by striking all after
25 “baseline funding profile” and inserting in lieu

1 thereof “for the development and operational life of
2 Landsat 7 that is mutually acceptable to the agen-
3 cies constituting the Landsat Program Manage-
4 ment;”;

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

7 “The Director of the Office of Science and Technology
8 Policy shall, no later than October 1, 1994, transmit the
9 management plan to the Committee on Science, Space,
10 and Technology of the House of Representatives and the
11 Committee on Commerce, Science, and Transportation of
12 the Senate.”;

13 (7) in sections 101(c)(3), 202(b)(1), 501(a),
14 and 502(c)(7), by striking “section 506” and insert-
15 ing in lieu thereof “section 507”;

16 (8) in section 102(b)(1), by striking “by the ex-
17 pected end of the design life of Landsat 6” and in-
18 serting in lieu thereof “by the predicted end of life
19 of Landsat 5, or as soon as practicable thereafter”;

20 (9) in section 103(a), by striking “section 105”
21 and inserting in lieu thereof “section 104”;

22 (10) by adding at the end of section 103 the
23 following new subsection:

24 “(c) IMPLEMENTATION OF AGREEMENT.—If negotia-
25 tions under subsection (a) result in an agreement that the

1 Landsat Program Management determines generally
2 achieves the goals stated in subsection (a)(1) through (8),
3 the Landsat Program Management shall award an exten-
4 sion, until the practical demise of Landsat 4 or Landsat
5 5, whichever occurs later, of the existing contract with the
6 Landsat 6 contractor incorporating the terms of such
7 agreement.”;

8 (11) by striking section 104 and redesignating
9 section 105 as section 104;

10 (12) in section 201(c)—

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

13 (B) by amending the second sentence
14 thereof to read as follows: “If the Secretary de-
15 termines that the license requested by the appli-
16 cant should not be issued, the Secretary shall
17 inform the applicant within such 90-day period
18 of the reasons for such determination and the
19 specific actions required of the applicant to ob-
20 tain a license.”;

21 (13) in section 202(b)(6), by inserting “, other
22 than for the sale of data generated by the system in
23 accordance with the license, that” after “of any
24 agreement”;

1 (14) in section 204, by striking “may” and in-
2 sserting in lieu thereof “shall”;

3 (15) by inserting at the end of title II the fol-
4 lowing new section:

5 **“SEC. 206. NOTIFICATION.**

6 “(a) LIMITATIONS ON LICENSEE.—Within 30 days
7 after any determination by the Secretary to require a li-
8 censee to limit collection or distribution of data from a
9 system licensed pursuant to this title, the Secretary shall
10 report to the Congress the reasons for such determination,
11 the limitations imposed on the licensee, and the period
12 during which such limitations apply.

13 “(b) TERMINATION, MODIFICATION, OR SUSPEN-
14 SION.—Within 30 days after any action by the Secretary
15 to seek an order of injunction or other judicial determina-
16 tion pursuant to section 203(a)(2), the Secretary shall no-
17 tify the Congress of such action and provide the reasons
18 for such action.”;

19 (16) in section 302—

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

21 and

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

23 (17) in section 507, by striking subsection (a)
24 and subsection (b)(1) and inserting in lieu thereof
25 the following:

1 “(a) RESPONSIBILITY OF SECRETARY OF DE-
2 FENSE.—The Secretary shall consult with the Secretary
3 of Defense on all matters under this Act affecting national
4 security. Within 30 days after receiving a request from
5 the Secretary, the Secretary of Defense shall recommend
6 any conditions for a license issued under title II, consist-
7 ent with this Act, that the Secretary of Defense deter-
8 mines are needed to protect the national security of the
9 United States. If no such recommendations have been re-
10 ceived by the Secretary within such 30-day period, the
11 Secretary may deem activities proposed in the license ap-
12 plication to be consistent with the protection of the na-
13 tional security of the United States.

14 “(b) RESPONSIBILITY OF SECRETARY OF STATE.—
15 (1) The Secretary shall consult with the Secretary of State
16 on all matters under this Act affecting international obli-
17 gations of the United States. Within 30 days after receiv-
18 ing a request from the Secretary, the Secretary of State
19 shall recommend any conditions for a license issued under
20 title II, consistent with this Act, that the Secretary of
21 State determines are needed to meet existing international
22 obligations of the United States. If no such recommenda-
23 tions have been received by the Secretary within such 30-
24 day period, the Secretary may deem activities proposed in

1 the license application to be consistent with existing inter-
2 national obligations of the United States.”.

3 **TITLE IV—AERONAUTICAL**
4 **RESEARCH AND TECHNOLOGY**

5 **SEC. 401. FINDINGS.**

6 The Congress finds that—

7 (1) the United States aeronautics industry has
8 provided a major contribution to the competitiveness
9 of the United States, and has accounted for over
10 \$80,000,000,000 in annual sales and over
11 \$20,000,000,000 in positive balance of trade;

12 (2) the international market share of the Unit-
13 ed States aeronautics industry has steadily eroded
14 due to competition from foreign consortia that re-
15 ceive substantial direct subsidies from their govern-
16 ments;

17 (3) the United States aeronautics industry has
18 been severely impacted by the reductions in defense
19 spending, leading to reduced levels of research and
20 development investment by industry;

21 (4) the foreign policy of the United States has
22 included maintaining United States competitiveness
23 and technology leadership in areas of strategic inter-
24 est, such as aeronautics, but United States aero-
25 nautics has not been addressed in United States for-

1 eign policy with the same emphasis as United States
2 international space endeavors;

3 (5) no effective means have been developed by
4 which the National Aeronautics and Space Adminis-
5 tration can accurately measure the contribution of
6 its research toward achieving United States competi-
7 tiveness and maintaining technological leadership;
8 and

9 (6) maintaining experimental state-of-the-art
10 facilities has been a key investment to retaining
11 United States competitiveness and technological
12 leadership, and these facilities have been heavily uti-
13 lized by United States industry in their research and
14 development programs.

15 **SEC. 402. AERONAUTICS POLICY OF THE NATIONAL AERO-**
16 **NAUTICS AND SPACE ADMINISTRATION.**

17 It is the policy of the United States that—

18 (1) improving the competitive capability of the
19 United States aeronautics industry shall be a fun-
20 damental goal of the aeronautical research and de-
21 velopment programs of the National Aeronautics and
22 Space Administration;

23 (2) the investment in aeronautics technology by
24 the National Aeronautics and Space Administration

1 shall be closely coordinated with United States in-
2 dustry;

3 (3) the establishment of industry-led,
4 precompetitive consortia shall be encouraged to bet-
5 ter prioritize and coordinate the industry require-
6 ments for advanced technologies and facilities;

7 (4) revitalizing national aeronautical facilities
8 shall be a major element of Federal investment in
9 aeronautical research and development; and

10 (5) industry and government cost-sharing for
11 facilities construction and use shall be investigated
12 to achieve aeronautics research and technology goals
13 within a constrained Federal budget.

14 **SEC. 403. AMENDMENTS TO THE NATIONAL AERONAUTICS**
15 **AND SPACE ACT OF 1958.**

16 (a) TECHNICAL CORRECTION AMENDMENT.—(1)
17 Section 214 of the National Aeronautics and Space Ad-
18 ministration Authorization Act, Fiscal Year 1989 is
19 amended by striking “(c)” both places it appears and in-
20 serting in lieu thereof “(d)”.

21 (2) The amendment made by paragraph (1) shall be
22 effective as of the date of enactment of the Act referred
23 to in paragraph (1).

1 (b) OBJECTIVES.—Section 102(d) of the National
2 Aeronautics and Space Act of 1958 (42 U.S.C. 2451(d))
3 is amended—

4 (1) by striking “and” at the end of paragraph
5 (8);

6 (2) by striking the period at the end of para-
7 graph (9) and inserting in lieu thereof a semicolon;
8 and

9 (3) by adding at the end the following new
10 paragraphs:

11 “(10) The economic growth, competitiveness,
12 and productivity of the Nation through close coordi-
13 nation with industry in the conduct of innovative
14 aeronautics technology validation and technology
15 transfer programs; and

16 “(11) The improvement of the safety, capacity,
17 and efficiency of the United States air transpor-
18 tation system through close coordination among the
19 agencies of the Federal Government.”.

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

21 **PLAN.**

22 (a) PLAN.—The Administrator shall develop an aero-
23 nautical basic research investment plan which—

24 (1) describes the aeronautical basic research
25 underway within the United States, including a re-

1 view of the status of United States basic research in
2 critical aeronautics disciplines including—

3 (A) aerodynamics;

4 (B) propulsion;

5 (C) materials and structures;

6 (D) controls, guidance, and human factors;

7 and

8 (E) flight systems;

9 (2) establishes goals and objectives for United
10 States aeronautical basic research to advance the
11 critical disciplines required by United States indus-
12 try for such research;

13 (3) identifies the priorities for aeronautical
14 basic research required by industry to advance
15 United States long-term competitiveness;

16 (4) describes the anticipated impact of aero-
17 nautical basic research on United States long-term
18 competitiveness;

19 (5) encourages the transfer of Government-de-
20 veloped technologies to the private sector to promote
21 economic strength and competitiveness; and

22 (6) identifies opportunities for aeronautical
23 basic research to be performed by minority-owned
24 and women-owned businesses within the aeronautical
25 basic research industry.

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

4 (b) INDEPENDENT EVALUATION.—The Adminis-
5 trator shall submit the plan developed under subsection
6 (a), and all subsequent annual updates thereto, along with
7 appropriate programmatic technical, schedule, and finan-
8 cial information, to the National Research Council of the
9 National Academy of Sciences for an independent evalua-
10 tion of such plan.

11 (c) TRANSMITTAL TO CONGRESS.—The Adminis-
12 trator shall, along with the first annual budget request
13 of the President occurring more than 1 year after the date
14 of enactment of this Act, transmit to the Congress the
15 plan developed under subsection (a) and the results of the
16 independent review conducted pursuant to subsection (b).
17 Subsequent annual updates to the plan and independent
18 reviews thereof shall be transmitted to the Congress along
19 with subsequent annual budget requests of the President.

20 **SEC. 405. ROLE OF PROCUREMENT IN TECHNOLOGY IN-**
21 **VESTMENT.**

22 The Administrator, in carrying out aeronautical re-
23 search and technology procurement, shall—

24 (1) promote the advancement of state-of-the-art
25 research and technologies;

1 (2) assess and procure, where appropriate, com-
2 mercially available technologies;

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

5 (4) reduce the paperwork requirements associ-
6 ated with procurement.

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

8 (a) STRATEGY.—The President shall establish a
9 strategy to coordinate with domestic aeronautical compa-
10 nies to establish the requirements of such companies and
11 the Federal Government for aeronautical test facilities.
12 The strategy shall—

13 (1) define the capabilities of aeronautical test
14 facilities required by domestic aeronautical compa-
15 nies and the Federal Government over the next 30
16 years;

17 (2) assess the impact to United States competi-
18 tiveness over the next 30 years resulting from the
19 use of a combination of domestic and foreign aero-
20 nautical test facilities by domestic companies; and

21 (3) identify a funding method for procuring
22 new aeronautical test facilities which includes cost
23 sharing and risk sharing with domestic aeronautical
24 companies, and which uses innovative financing

1 schemes for the construction and operation of such
2 new facilities.

3 (b) TRANSMITTAL TO CONGRESS.—The strategy es-
4 tablished under subsection (a), along with anticipated
5 budget requirements over the next 10 years associated
6 with implementing the strategy, shall be transmitted to
7 the Congress no later than 6 months after the date of en-
8 actment of this Act.

9 **SEC. 407. JOINT AERONAUTICAL RESEARCH AND DEVELOP-**
10 **MENT PROGRAM.**

11 (a) ESTABLISHMENT.—The Administrator and the
12 heads of other appropriate Federal agencies shall jointly
13 establish a program for the purpose of conducting re-
14 search on aeronautical technologies that enhance United
15 States competitiveness. Such program shall include—

16 (1) research on next-generation wind tunnel
17 and advanced wind tunnel instrumentation tech-
18 nology;

19 (2) research on advanced engine materials, en-
20 gine concepts, and testing of propulsion systems or
21 components of the high-speed civil transport re-
22 search program;

23 (3) advanced general aviation research;

24 (4) advanced rotorcraft research; and

25 (5) advanced hypersonic aeronautical research.

1 (b) **CONTRACTS AND GRANTS.**—Contracts and grants
2 entered into under the program established under sub-
3 section (a) shall be administered using procedures devel-
4 oped jointly by the Administrator and the heads of the
5 other Federal agencies involved in the program. These
6 procedures should include an integrated acquisition policy
7 for contract and grant requirements and for technical data
8 rights that are not an impediment to joint programs
9 among the National Aeronautics and Space Administra-
10 tion, the other Federal agencies involved in the program,
11 and industry.

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

14 (1) selected programs that jointly enhance pub-
15 lic and private aeronautical technology development;

16 (2) an opportunity for private contractors to be
17 involved in such technology research and develop-
18 ment; and

19 (3) the transfer of Government-developed tech-
20 nologies to the private sector to promote economic
21 strength and competitiveness.

22 **SEC. 408. HYPERSONIC RESEARCH INITIATIVE.**

23 The Administrator shall conduct a study, through an
24 organization not a part of the National Aeronautics and
25 Space Administration, of strategies that would optimize

1 the Hypersonic System Technology Program by integrat-
2 ing with the rocket-based hypersonic flight test experi-
3 ments the necessary development program which would
4 achieve a single-stage hypersonic research vehicle capable
5 of Mach 15 or greater, in the shortest possible time frame.
6 The objective of a program developed under the strategies
7 identified through such study would be the development
8 of a single stage to orbit air breathing aircraft. The Ad-
9 ministrator shall report the results of the study to Con-
10 gress no later than 6 months after the date of enactment
11 of this Act.

Passed the House of Representatives August 8,
1994.

Attest:

Clerk.

103^D CONGRESS
2^D SESSION

H. R. 4489

AN ACT

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.