

109<sup>TH</sup> CONGRESS  
1<sup>ST</sup> SESSION

# H. R. 3070

To reauthorize the human space flight, aeronautics, and science programs of the National Aeronautics and Space Administration, and for other purposes.

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## IN THE HOUSE OF REPRESENTATIVES

JUNE 27, 2005

Mr. CALVERT (for himself and Mr. BOEHLERT) introduced the following bill; which was referred to the Committee on Science

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## A BILL

To reauthorize the human space flight, aeronautics, and science programs of the National Aeronautics and Space Administration, 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 Act of 2005”.

6 **SEC. 2. FINDINGS.**

7 The Congress finds that—

1           (1) on January 14, 2004, the President un-  
2           veiled the Vision for Space Exploration to guide  
3           United States policy on human space exploration;

4           (2) the National Aeronautics and Space Admin-  
5           istration should continue to support robust programs  
6           in space science, aeronautics, and earth science as it  
7           moves forward with plans to send Americans to the  
8           Moon, Mars, and worlds beyond; and

9           (3) the National Aeronautics and Space Admin-  
10          istration’s programs can advance the frontiers of  
11          science, expanding understanding of our planet and  
12          of the universe, and contribute to American pros-  
13          perity.

14 **SEC. 3. DEFINITIONS.**

15          For the purposes of this Act—

16           (1) the term “Administration” means the Na-  
17           tional Aeronautics and Space Administration; and

18           (2) the term “Administrator” means the Ad-  
19           ministrator of the National Aeronautics and Space  
20           Administration.

21 **SEC. 4. RESPONSIBILITIES, POLICIES, AND PLANS.**

22          (a) GENERAL RESPONSIBILITIES.—

23           (1) PROGRAMS.—The Administrator shall en-  
24           sure that the Administration carries out a balanced

1 set of programs that shall include, at a minimum,  
2 programs in—

3 (A) human space flight, in accordance with  
4 subsection (b);

5 (B) aeronautics research and development;  
6 and

7 (C) scientific research, which shall include,  
8 at a minimum—

9 (i) robotic missions to study planets,  
10 and to deepen understanding of astronomy,  
11 astrophysics, and other areas of science  
12 that can be productively studied from  
13 space;

14 (ii) earth science research and re-  
15 search on the Sun-Earth connection  
16 through the development and operation of  
17 research satellites and other means; and

18 (iii) support of university research in  
19 space science and earth science.

20 (2) CONSULTATION AND COORDINATION.—In  
21 carrying out the programs of the Administration, the  
22 Administrator shall—

23 (A) consult and coordinate to the extent  
24 appropriate with other relevant Federal agen-

1           cies, including through the National Science  
2           and Technology Council;

3           (B) work closely with the private sector,  
4           including by—

5                 (i) encouraging the work of entre-  
6                 preneurs who are seeking to develop new  
7                 means to send satellites, crew, or cargo to  
8                 outer space;

9                 (ii) contracting with the private sector  
10                for crew and cargo services to the extent  
11                practicable; and

12               (iii) using commercially available  
13                products (including software) and services  
14                to the extent practicable to support all Ad-  
15                ministration activities; and

16           (C) involve other nations to the extent ap-  
17           propriate.

18           (b) VISION FOR SPACE EXPLORATION.—

19               (1) GOALS.—The Administrator shall manage  
20               human space flight programs so as to achieve the  
21               following goals:

22                   (A) Returning Americans to the Moon no  
23                   later than 2020.

24                   (B) Launching the Crew Exploration Vehi-  
25                   cle as close to 2010 as possible.

1           (C) Increasing knowledge of the impacts of  
2 long duration stays in space on the human body  
3 using the most appropriate facilities available.

4           (D) Enabling humans to land on and re-  
5 turn from Mars and other destinations on a  
6 timetable that is technically and fiscally pos-  
7 sible.

8           (2) SPACE SHUTTLE.—The Space Shuttle shall  
9 not be launched after December 31, 2010.

10       (c) AERONAUTICS.—

11           (1) IN GENERAL.—The President of the United  
12 States, through the Administrator, and in consulta-  
13 tion with other Federal agencies, shall develop a na-  
14 tional aeronautics policy to guide the aeronautics  
15 programs of the Administration through 2020.

16           (2) CONTENT.—At a minimum, the national  
17 aeronautics policy shall describe for the Administra-  
18 tion—

19           (A) the priority areas of research for aero-  
20 nautics through fiscal year 2011;

21           (B) the basis on which and the process by  
22 which priorities for ensuing fiscal years will be  
23 selected;

1 (C) the facilities and personnel needed to  
2 carry out the aeronautics program through fis-  
3 cal year 2011; and

4 (D) the budget assumptions on which the  
5 national aeronautics policy is based.

6 (3) CONSIDERATIONS.—In developing the na-  
7 tional aeronautics policy, the President shall con-  
8 sider the following issues, which shall be discussed  
9 in the transmittal under paragraph (5):

10 (A) The extent to which the Administra-  
11 tion should focus on long-term, high-risk re-  
12 search or more incremental research, and the  
13 expected impact on the United States aircraft  
14 and airline industries of that decision.

15 (B) The extent to which the Administra-  
16 tion should address military and commercial  
17 needs.

18 (C) How the Administration will coordi-  
19 nate its aeronautics program with other Federal  
20 agencies.

21 (D) The extent to which the Administra-  
22 tion will fund university research, and the ex-  
23 pected impact of that funding on the supply of  
24 United States workers for the aeronautics in-  
25 dustry.

1           (4) CONSULTATION.—In the development of the  
2 national aeronautics policy, the Administrator shall  
3 consult widely with academic and industry experts  
4 and with other Federal agencies. The Administrator  
5 may enter into an arrangement with the National  
6 Academy of Sciences to help develop the national  
7 aeronautics policy.

8           (5) SCHEDULE.—The Administrator shall  
9 transmit the national aeronautics policy to the Com-  
10 mittee on Appropriations and the Committee on  
11 Science of the House of Representatives, and to the  
12 Committee on Appropriations and the Committee on  
13 Commerce, Science, and Transportation of the Sen-  
14 ate, not later than the date on which the President  
15 submits the proposed budget for the Federal Gov-  
16 ernment for fiscal year 2007 to the Congress. The  
17 Administrator shall make available to those commit-  
18 tees any study done by a nongovernmental entity  
19 that was used in the development of the national  
20 aeronautics policy.

21 (d) SCIENCE.—

22           (1) IN GENERAL.—The Administrator shall de-  
23 velop a policy to guide the science programs of the  
24 Administration through 2020.

1           (2) CONTENT.—At a minimum, the policy shall  
2 describe—

3           (A) the missions the Administration will  
4 initiate, design, develop, launch, or operate in  
5 space science and earth science through fiscal  
6 year 2011, including launch dates;

7           (B) a priority ranking of all of the mis-  
8 sions listed under subparagraph (A), and the  
9 rationale for the ranking;

10          (C) the budget assumptions on which the  
11 policy is based; and

12          (D) the facilities and personnel needed to  
13 carry out the science policy through fiscal year  
14 2011.

15          (3) CONSIDERATIONS.—In developing the  
16 science policy under this subsection, the Adminis-  
17 trator shall consider the following issues, which shall  
18 be discussed in the transmittal under paragraph (6):

19           (A) What the most important scientific  
20 questions in space science and earth science  
21 are.

22           (B) The relationship between the Adminis-  
23 tration's space and earth science activities and  
24 those of other Federal agencies.

1           (4) CONSULTATION.—In developing the policy  
2           under this subsection, the Administrator shall draw  
3           on decadal surveys and other reports in planetary  
4           science, astronomy, solar and space physics, earth  
5           science, and any other relevant fields developed by  
6           the National Academy of Sciences. The Adminis-  
7           trator shall also consult widely with academic and  
8           industry experts and with other Federal agencies.

9           (5) HUBBLE SPACE TELESCOPE.—The policy  
10          developed under this subsection shall address plans  
11          for a human mission to repair the Hubble Space  
12          Telescope.

13          (6) SCHEDULE.—The Administrator shall  
14          transmit the policy developed under this subsection  
15          to the Committee on Science of the House of Rep-  
16          resentatives and the Committee on Commerce,  
17          Science, and Transportation of the Senate not later  
18          than the date on which the President submits the  
19          proposed budget for the Federal Government for fis-  
20          cal year 2007 to the Congress. The Administrator  
21          shall make available to those committees any study  
22          done by a nongovernmental entity that was used in  
23          the development of the policy.

24          (e) FACILITIES.—

1           (1) IN GENERAL.—The Administrator shall de-  
2           velop a plan for managing the Administration’s fa-  
3           cilities through fiscal year 2015. The plan shall be  
4           consistent with the policies and plans developed pur-  
5           suant to this section.

6           (2) CONTENT.—At a minimum, the plan shall  
7           describe—

8                   (A) any new facilities the Administration  
9                   intends to acquire, whether through construc-  
10                  tion, purchase, or lease, and the expected dates  
11                  for doing so;

12                  (B) any facilities the Administration in-  
13                  tends to significantly modify, and the expected  
14                  dates for doing so;

15                  (C) any facilities the Administration in-  
16                  tends to close, and the expected dates for doing  
17                  so;

18                  (D) any transaction the Administration in-  
19                  tends to conduct to sell, lease, or otherwise  
20                  transfer the ownership of a facility, and the ex-  
21                  pected dates for doing so;

22                  (E) how each of the actions described in  
23                  subparagraphs (A), (B), (C), and (D) will en-  
24                  hance the ability of the Administration to carry  
25                  out its programs;

1 (F) the expected costs or savings expected  
2 from each of the actions described in subpara-  
3 graphs (A), (B), (C), and (D);

4 (G) the priority order of the actions de-  
5 scribed in subparagraphs (A), (B), (C), and  
6 (D);

7 (H) the budget assumptions of the plan;  
8 and

9 (I) how facilities were evaluated in devel-  
10 oping the plan.

11 (3) SCHEDULE.—The Administrator shall  
12 transmit the plan developed under this subsection to  
13 the Committee on Science of the House of Rep-  
14 resentatives and the Committee on Commerce,  
15 Science, and Transportation of the Senate not later  
16 than the date on which the President submits the  
17 proposed budget for the Federal Government for fis-  
18 cal year 2008 to the Congress.

19 (f) WORKFORCE.—

20 (1) IN GENERAL.—The Administrator shall de-  
21 velop a human capital strategy to ensure that the  
22 Administration has a workforce of the appropriate  
23 size and with the appropriate skills to carry out the  
24 programs of the Administration, consistent with the  
25 policies and plans developed pursuant to this section.

1 The strategy shall cover the period through fiscal  
2 year 2011.

3 (2) CONTENT.—The strategy shall describe, at  
4 a minimum—

5 (A) any categories of employees the Ad-  
6 ministration intends to reduce, the expected size  
7 and timing of those reductions, the methods the  
8 Administration intends to use to make the re-  
9 ductions, and the reasons the Administration no  
10 longer needs those employees;

11 (B) any categories of employees the Ad-  
12 ministration intends to increase, the expected  
13 size and timing of those increases, the methods  
14 the Administration intends to use to recruit the  
15 additional employees, and the reasons the Ad-  
16 ministration needs those employees; and

17 (C) the budget assumptions of the strat-  
18 egy, and any expected additional costs or sav-  
19 ings from the strategy by fiscal year.

20 (3) SCHEDULE.—The Administrator shall  
21 transmit the strategy developed under this sub-  
22 section to the Committee on Science of the House of  
23 Representatives and the Committee on Commerce,  
24 Science, and Transportation of the Senate not later  
25 than the date on which the President submits the

1 proposed budget for the Federal Government for fis-  
2 cal year 2007 to the Congress.

3 (4) LIMITATION.—The Administration may not  
4 initiate any buyout offer or Reduction in Force until  
5 60 days after the strategy required by this sub-  
6 section has been transmitted to the Congress in ac-  
7 cordance with paragraph (3).

8 (g) CENTER MANAGEMENT.—

9 (1) IN GENERAL.—The Administrator shall con-  
10 duct a study to determine whether any of the Ad-  
11 ministration's centers should be operated by or with  
12 the private sector by converting a center to a Feder-  
13 ally Funded Research and Development Center or  
14 through any other mechanism.

15 (2) CONTENT.—The study shall, at a min-  
16 imum—

17 (A) make a recommendation for the oper-  
18 ation of each center and provide reasons for  
19 that recommendation; and

20 (B) describe the advantages and disadvan-  
21 tages of each mode of operation considered in  
22 the study.

23 (3) CONSIDERATIONS.—In conducting the  
24 study, the Administrator shall take into consider-  
25 ation the experiences of other relevant Federal agen-

1       cies in operating laboratories and centers and any  
2       reports that have reviewed the mode of operation of  
3       those laboratories and centers, as well as any reports  
4       that have reviewed the Administration's centers.

5           (4) SCHEDULE.—The Administrator shall  
6       transmit the study conducted under this subsection  
7       to the Committee on Science of the House of Rep-  
8       resentatives and the Committee on Commerce,  
9       Science, and Transportation of the Senate not later  
10      than May 31, 2006.

11      (h) BUDGETS.—The proposed budget for the Admin-  
12     istration submitted by the President for each fiscal year  
13     shall be accompanied by documents showing—

14           (1) the budget for each element of the human  
15     space flight program;

16           (2) the budget for aeronautics;

17           (3) the budget for space science;

18           (4) the budget for earth science;

19           (5) the Corporate and Center General and Ad-  
20     ministrative expenses and Service Pool costs for each  
21     center and for headquarters, and for each direc-  
22     torate;

23           (6) the budget for the Integrated Financial  
24     Management Program, by individual element;

1           (7) the budget for the Independent Technical  
2 Authority, both total and by center;

3           (8) the budget for public relations, by program;

4           (9) the comparable figures for at least the 2  
5 previous fiscal years for each item in the proposed  
6 budget; and

7           (10) the amount of unobligated funds and un-  
8 expended funds, by appropriations account, that will  
9 be carried over into the year for which the budget  
10 is being presented, and the estimated amount of un-  
11 obligated funds and unexpended funds that will re-  
12 main at the end of the year for which the budget is  
13 being presented.

14 **SEC. 5. AUTHORIZATION OF APPROPRIATIONS.**

15       There are authorized to be appropriated to the Ad-  
16 ministration for fiscal year 2006 \$16,471,050,000.

17 **SEC. 6. REPORTS.**

18       (a) IMMEDIATE ISSUES.—Not later than September  
19 30, 2005, the Administrator shall transmit to the Com-  
20 mittee on Science of the House of Representatives and the  
21 Committee on Commerce, Science, and Transportation of  
22 the Senate a report on each of the following items:

23           (1) The research agenda for the International  
24 Space Station and its proposed final configuration.

1           (2) The number of flights the Space Shuttle  
2 will make before its retirement, the purpose of those  
3 flights, and the expected date of the final flight.

4           (3) A description of the means, other than the  
5 Space Shuttle, that may be used to ferry crew and  
6 cargo to the International Space Station.

7           (4) A plan for the operation of the Inter-  
8 national Space Station in the event that the Iran  
9 Nonproliferation Act of 2000 is not amended.

10          (5) A description of the launch vehicle for the  
11 Crew Exploration Vehicle.

12          (6) A description of any heavy lift vehicle the  
13 Administration intends to develop, the intended uses  
14 of that vehicle, and whether the decision to develop  
15 that vehicle has undergone an interagency review.

16          (7) A description of the intended purpose of  
17 lunar missions and the architecture for those mis-  
18 sions.

19          (8) The program goals for Project Prometheus.

20          (9) A plan for managing the cost increase for  
21 the James Webb Space Telescope.

22          (b) CREW EXPLORATION VEHICLE.—The Adminis-  
23 trator shall not enter into a development contract for the  
24 Crew Exploration Vehicle until at least 30 days after the  
25 Administrator has transmitted to the Committee on

1 Science of the House of Representatives and the Com-  
2 mittee on Commerce, Science, and Transportation of the  
3 Senate a report describing—

4           (1) the expected cost of the Crew Exploration  
5 Vehicle through fiscal year 2020, based on the speci-  
6 fications of that development contract; and

7           (2) the expected budgets for each fiscal year  
8 through fiscal year 2020 for human space explo-  
9 ration, aeronautics, space science, and earth  
10 science—

11           (A) first assuming inflationary growth for  
12 the budget of the Administration as a whole  
13 and including costs for the Crew Exploration  
14 Vehicle as projected under paragraph (1); and

15           (B) then assuming inflationary growth for  
16 the budget of the Administration as a whole  
17 and including at least two cost estimates for the  
18 Crew Exploration Vehicle that are higher than  
19 those projected under paragraph (1), based on  
20 the Administration’s past experience with cost  
21 increases for similar programs, along with a de-  
22 scription of the reasons for selecting the cost  
23 estimates used for the calculations under this  
24 subparagraph and the probability that the cost

1           of the Crew Exploration Vehicle will reach those  
2           estimated amounts.

3           (c) SPACE COMMUNICATIONS.—Not later than Feb-  
4 ruary 15, 2007, the Administrator shall transmit to the  
5 Committee on Science of the House of Representatives  
6 and the Committee on Commerce, Science, and Transpor-  
7 tation of the Senate a plan for updating the space commu-  
8 nications and navigation architecture for both low Earth  
9 orbit and deep space exploration so that it is capable of  
10 handling the activities described pursuant to section 4(b)  
11 and (d). The plan shall include life-cycle cost estimates,  
12 milestones, estimated performance capabilities, and 5-year  
13 funding profiles. The Administrator shall consult with  
14 other relevant Federal agencies in developing the plan  
15 under this subsection and shall include in the plan an esti-  
16 mate of the amount of any reimbursements the Adminis-  
17 tration is likely to receive from other Federal agencies dur-  
18 ing the expected life of the upgrades described in the plan.

19           (d) PUBLIC RELATIONS.—The Administration shall  
20 not initiate the national awareness campaign required by  
21 the report of the Committee on Appropriations of the  
22 House of Representatives accompanying the Science,  
23 State, Justice, Commerce, and Related Agencies Appro-  
24 priations Act, 2006 until 30 days after the Administrator  
25 has transmitted a report to the Committee on Appropria-

1 tions and the Committee on Science of the House of Rep-  
2 resentatives, and to the Committee on Appropriations and  
3 the Committee on Commerce, Science, and Transportation  
4 of the Senate, describing the activities that will be under-  
5 taken as part of the awareness campaign and their ex-  
6 pected cost.

7 (e) JOINT DARK ENERGY MISSION.—The Adminis-  
8 trator and the Director of the Department of Energy Of-  
9 fice of Science shall jointly transmit to the Committee on  
10 Science of the House of Representatives and the Com-  
11 mittee on Commerce, Science, and Transportation of the  
12 Senate, not later than the date on which the President  
13 submits the proposed budget for the Federal Government  
14 for fiscal year 2007, a report on plans for a Joint Dark  
15 Energy Mission. The report shall include the amount of  
16 funds each agency intends to expend on the Joint Dark  
17 Energy Mission for each of the fiscal years 2007 through  
18 2011, and specific milestones for the development and  
19 launch of the Mission.

20 (f) SHUTTLE EMPLOYEE TRANSITION.—The Admin-  
21 istrator shall consult with other appropriate Federal agen-  
22 cies and with Administration contractors and employees  
23 to develop a transition plan for Federal and contractor  
24 personnel engaged in the Space Shuttle program. The plan  
25 shall include actions to assist Federal and contractor per-

1 sonnel to take advantage of training, retraining, job place-  
2 ment, and relocation programs, and any other actions that  
3 the Administration will take to assist the employees. The  
4 Administrator shall transmit the plan to the Committee  
5 on Science of the House of Representatives and the Com-  
6 mittee on Commerce, Science, and Transportation of the  
7 Senate not later than 90 days after the date of enactment  
8 of this Act.

9 (g) OFFICE OF SCIENCE AND TECHNOLOGY POL-  
10 ICY.—

11 (1) STUDY.—The Director of the Office of  
12 Science and Technology Policy shall conduct a study  
13 to determine—

14 (A) if any research and development pro-  
15 grams of the Administration are unnecessarily  
16 duplicating aspects of programs of other Fed-  
17 eral agencies; and

18 (B) if any research and development pro-  
19 grams of the Administration are neglecting any  
20 topics of national interest that are related to  
21 the mission of the Administration.

22 (2) REPORT.—Not later than March 1, 2006,  
23 the Director of the Office of Science and Technology  
24 Policy shall transmit to the Committee on Science of  
25 the House of Representatives and the Committee on

1 Commerce, Science, and Transportation of the Sen-  
2 ate a report that—

3 (A) describes the results of the study  
4 under paragraph (1);

5 (B) recommends any changes to the re-  
6 search and development programs of the Ad-  
7 ministration that should be made to eliminate  
8 unnecessary duplication or address topics of na-  
9 tional interest; and

10 (C) describes mechanisms the Office of  
11 Science and Technology Policy will use to en-  
12 sure adequate coordination between the Admin-  
13 istration and Federal agencies that operate re-  
14 lated programs.

15 **SEC. 7. BASELINES AND COST CONTROLS.**

16 (a) **CONDITIONS FOR DEVELOPMENT.**—

17 (1) **IN GENERAL.**—The Administration shall  
18 not enter into a contract for the development phase  
19 of a major program unless the Administrator deter-  
20 mines that—

21 (A) the technical, cost, and schedule risks  
22 of the program are clearly identified and the  
23 program has developed a plan to manage those  
24 risks; and

1 (B) the program complies with all relevant  
2 policies, regulations, and directives of the Ad-  
3 ministration.

4 (2) REPORT.—The Administrator shall trans-  
5 mit a report describing the basis for the determina-  
6 tion required under paragraph (1) to the Committee  
7 on Science of the House of Representatives and the  
8 Committee on Commerce, Science, and Transpor-  
9 tation of the Senate at least 30 days before entering  
10 into a contract for development under a major pro-  
11 gram.

12 (3) NONDELEGATION.—The Administrator may  
13 not delegate the determination requirement under  
14 this subsection.

15 (b) MAJOR PROGRAM ANNUAL REPORTS.—

16 (1) REQUIREMENT.—Not later than February  
17 15 of each year following the date of enactment of  
18 this Act, the Administrator shall transmit to the  
19 Committee on Science of the House of Representa-  
20 tives and the Committee on Commerce, Science, and  
21 Transportation of the Senate a report on each major  
22 program for which the Administration proposes to  
23 expend funds in the subsequent fiscal year. Reports  
24 under this section shall be known as Major Program  
25 Annual Reports.

1           (2) BASELINE REPORT.—The first Major Pro-  
2           gram Annual Report for each major program shall  
3           include a Baseline Report that shall, at a minimum,  
4           include—

5                   (A) the purposes of the program and key  
6                   technical characteristics necessary to fulfill  
7                   those purposes;

8                   (B) an estimate of the life-cycle cost for  
9                   the program, with a detailed breakout of the  
10                  development cost and an estimate of the annual  
11                  costs until the development is completed;

12                  (C) the schedule for the development, in-  
13                  cluding key program milestones; and

14                  (D) the name of the person responsible for  
15                  making notifications under subsection (c), who  
16                  shall be an individual whose primary responsi-  
17                  bility is overseeing the program.

18           (3) INFORMATION UPDATES.—For major pro-  
19           grams with respect to which a Baseline Report has  
20           been previously submitted, each subsequent Major  
21           Program Annual Report shall describe any changes  
22           to the information that had been provided in the  
23           Baseline Report, and the reasons for those changes.

24           (c) NOTIFICATION.—

1           (1) REQUIREMENT.—The individual identified  
2           under subsection (b)(2)(D) shall immediately notify  
3           the Administrator any time that individual has rea-  
4           sonable cause to believe that, for the major program  
5           for which he or she is responsible—

6                   (A) the development cost of the program is  
7                   likely to exceed the estimate provided in the  
8                   Baseline Report of the program by 15 percent  
9                   or more; or

10                   (B) a milestone of the program is likely to  
11                   be delayed by 6 months or more from the date  
12                   provided for it in the Baseline Report of the  
13                   program.

14           (2) REASONS.—Not later than 7 days after the  
15           notification required under paragraph (1), the indi-  
16           vidual identified under subsection (b)(2)(D) shall  
17           transmit to the Administrator a written notification  
18           explaining the reasons for the change in the cost or  
19           milestone of the program for which notification was  
20           provided under paragraph (1).

21           (3) NOTIFICATION OF CONGRESS.—Not later  
22           than 5 days after the Administrator receives a writ-  
23           ten notification under paragraph (2), the Adminis-  
24           trator shall transmit the notification to the Com-  
25           mittee on Science of the House of Representatives

1 and the Committee on Commerce, Science, and  
2 Transportation of the Senate.

3 (d) FIFTEEN PERCENT THRESHOLD.—Not later  
4 than 30 days after receiving a written notification under  
5 subsection (c)(2), the Administrator shall determine  
6 whether the development cost of the program is likely to  
7 exceed the estimate provided in the Baseline Report of the  
8 program by 15 percent or more, or whether a milestone  
9 is likely to be delayed by 6 months or more. If the deter-  
10 mination is affirmative, the Administrator shall—

11 (1) transmit to the Committee on Science of the  
12 House of Representatives and the Committee on  
13 Commerce, Science, and Transportation of the Sen-  
14 ate, not later than 14 days after making the deter-  
15 mination, a report that includes—

16 (A) a description of the increase in cost or  
17 delay in schedule and a detailed explanation for  
18 the increase or delay;

19 (B) a description of actions taken or pro-  
20 posed to be taken in response to the cost in-  
21 crease or delay; and

22 (C) a description of any impacts the cost  
23 increase or schedule delay will have on any  
24 other program within the Administration; and

1           (2) if the Administrator intends to continue  
2 with the program, promptly initiate an analysis of  
3 the program, which shall include, at a minimum—

4           (A) the projected cost and schedule for  
5 completing the program if current requirements  
6 of the program are not modified;

7           (B) the projected cost and the schedule for  
8 completing the program after instituting the ac-  
9 tions described under paragraph (1)(B); and

10           (C) a description of, and the projected cost  
11 and schedule for, a broad range of alternatives  
12 to the program.

13 The Administration shall complete an analysis initiated  
14 under paragraph (2) not later than 6 months after the  
15 Administrator makes a determination under this sub-  
16 section. The Administrator shall transmit the analysis to  
17 the Committee on Science of the House of Representatives  
18 and Committee on Commerce, Science, and Transpor-  
19 tation of the Senate not later than 30 days after its com-  
20 pletion.

21           (e) THIRTY PERCENT THRESHOLD.—If the Adminis-  
22 trator determines under subsection (d) that the develop-  
23 ment cost of a program will exceed the estimate provided  
24 in the Baseline Report of the program by more than the  
25 lower of 30 percent or \$1,000,000,000, then, beginning

1 1 year after the date the Administrator transmits a report  
2 under subsection (d)(1), the Administrator shall not ex-  
3 pend any additional funds on the program, other than ter-  
4 mination costs, unless the Congress has subsequently au-  
5 thorized continuation of the program by law. If the pro-  
6 gram is continued, the Administrator shall submit a new  
7 Baseline Report for the program no later than 90 days  
8 after the date of enactment of the Act under which Con-  
9 gress has authorized continuation of the program.

10 (f) DEFINITIONS.—For the purposes of this section—

11 (1) the term “development” means the phase of  
12 a program following the formulation phase and be-  
13 ginning with the approval to proceed to implementa-  
14 tion, as defined in the Administration’s Procedural  
15 Requirements 7120.5c, dated March 22, 2005;

16 (2) the term “development cost” means the  
17 total of all costs, including construction of facilities  
18 and civil servant costs, from the period beginning  
19 with the approval to proceed to implementation  
20 through the achievement of operational readiness,  
21 without regard to funding source or management  
22 control, for the life of the program;

23 (3) the term “life-cycle cost” means the total of  
24 the direct, indirect, recurring, and nonrecurring  
25 costs, including the construction of facilities and civil

1       servant costs, and other related expenses incurred or  
2       estimated to be incurred in the design, development,  
3       verification, production, operation, maintenance,  
4       support, and retirement of a program over its  
5       planned lifespan, without regard to funding source  
6       or management control; and

7               (4) the term “major program” means an activ-  
8       ity approved to proceed to implementation that has  
9       an estimated life-cycle cost of more than  
10       \$100,000,000.

11 **SEC. 8. PRIZE AUTHORITY.**

12       The National Aeronautics and Space Act of 1958 (42  
13 U.S.C. 2451, et seq.) is amended by inserting after section  
14 313 the following new section:

15                       “PRIZE AUTHORITY

16       “SEC. 314. (a) IN GENERAL.—The Administration  
17 may carry out a program to competitively award cash  
18 prizes to stimulate innovation in basic and applied re-  
19 search, technology development, and prototype demonstra-  
20 tion that have the potential for application to the perform-  
21 ance of the space and aeronautical activities of the Admin-  
22 istration. The Administration may carry out a program  
23 to award prizes only in conformity with this section.

24       “(b) TOPICS.—In selecting topics for prize competi-  
25 tions, the Administrator shall consult widely both within

1 and outside the Federal Government, and may empanel  
2 advisory committees.

3 “(c) ADVERTISING.—The Administrator shall widely  
4 advertise prize competitions to encourage participation.

5 “(d) REQUIREMENTS AND REGISTRATION.—For each  
6 prize competition, the Administrator shall publish a notice  
7 in the Federal Register announcing the subject of the com-  
8 petition, the rules for being eligible to participate in the  
9 competition, the amount of the prize, and the basis on  
10 which a winner will be selected.

11 “(e) ELIGIBILITY.—To be eligible to win a prize  
12 under this section, an individual or entity—

13 “(1) shall have registered to participate in the  
14 competition pursuant to any rules promulgated by  
15 the Administrator under subsection (d);

16 “(2) shall have complied with all the require-  
17 ments under this section;

18 “(3) in the case of a private entity, shall be in-  
19 corporated in and maintain a primary place of busi-  
20 ness in the United States, and in the case of an in-  
21 dividual, whether participating singly or in a group,  
22 shall be a citizen or permanent resident of the  
23 United States; and

1           “(4) shall not be a Federal entity or Federal  
2           employee acting within the scope of their employ-  
3           ment.

4           “(f) LIABILITY.—(1) Registered participants must  
5           agree to assume any and all risks and waive claims against  
6           the United States Government and its related entities, ex-  
7           cept in the case of willful misconduct, for any injury,  
8           death, damage, or loss of property, revenue, or profits,  
9           whether direct, indirect, or consequential, arising from  
10          their participation in a competition, whether such injury,  
11          death, damage, or loss arises through negligence or other-  
12          wise. For the purposes of this subparagraph, the term ‘re-  
13          lated entity’ means a contractor or subcontractor at any  
14          tier, and a supplier, user, customer, cooperating party,  
15          grantee, investigator, or detailee.

16          “(2) Participants must obtain liability insurance or  
17          demonstrate financial responsibility in amounts to com-  
18          pensate for the maximum probable loss, as determined by  
19          the Administrator, from claims by—

20                 “(A) a third party for death, bodily injury, or  
21                 property damage, or loss resulting from an activity  
22                 carried out in connection with participation in a  
23                 competition, with the Federal Government named as  
24                 an additional insured under the registered partici-  
25                 pant’s insurance policy and registered participants

1       agreeing to indemnify the Federal Government  
2       against third party claims for damages arising from  
3       or related to competition activities; and

4               “(B) the United States Government for damage  
5       or loss to Government property resulting from such  
6       an activity.

7       “(g) INTELLECTUAL PROPERTY.—The Federal Gov-  
8       ernment shall not, by virtue of offering or providing a  
9       prize under this section, be entitled to any intellectual  
10      property rights derived as a consequence of, or direct rela-  
11      tion to, the participation by a registered participant in a  
12      competition authorized by this section. This subsection  
13      shall not be construed to prevent the Administration from  
14      negotiating a license for the use of intellectual property  
15      developed for a prize competition under this section.

16      “(h) JUDGES.—For each competition, the Adminis-  
17      tration, either directly or through a contract under sub-  
18      section (i), shall assemble a panel of qualified judges from  
19      both within and outside the Administration to select the  
20      winner or winners of the prize competition on the basis  
21      described pursuant to subsection (d). Judges for each  
22      competition shall include individuals from the private sec-  
23      tor. A judge may not—

24               “(1) have personal or financial interests in, or  
25      be employees, officers, directors, or agents of, any

1       entity that is a registered participant in a competi-  
2       tion; or

3               “(2) have a familial or financial relationship  
4       with an individual who is a registered participant.

5       “(i) ADMINISTERING THE COMPETITION.—The Ad-  
6       ministrators may enter into an agreement with a private,  
7       nonprofit entity to administer the prize competition, sub-  
8       ject to the provisions of this section.

9       “(j) FUNDING.—(1) The Administrator may accept  
10       funds from other Federal agencies and from the private  
11       sector for cash prizes under this section. Such funds shall  
12       not increase the amount of a prize after the amount has  
13       been announced pursuant to subsection (d). The Adminis-  
14       trator may not give any special consideration to any pri-  
15       vate sector entity in return for a donation.

16       “(2) Funds appropriated for the program under this  
17       section shall remain available until expended, and may be  
18       transferred, reprogrammed, or expended for other pur-  
19       poses only after the expiration of 10 fiscal years after the  
20       fiscal year for which the funds were originally appro-  
21       priated. No provision in this section permits obligation or  
22       payment of funds in violation of the Anti-Deficiency Act  
23       (31 U.S.C. 1341).

24       “(3) No prize may be announced under subsection  
25       (d) until all the funds for that prize have been appro-

1 priated or obligated for such purpose by a private sector  
2 source.

3 “(4) No prize competition under this section may  
4 offer a prize in an amount greater than \$10,000,000 un-  
5 less 30 days have elapsed after written notice has been  
6 provided to the Committee on Science of the House of  
7 Representatives and the Committee on Commerce,  
8 Science, and Transportation of the Senate.

9 “(k) USE OF NASA NAME AND INSIGNIA.—A reg-  
10 istered participant in a competition under this section may  
11 use the Administration’s name, initials, or insignia only  
12 after prior review and written approval by the Administra-  
13 tion.

14 “(l) COMPLIANCE WITH EXISTING LAW.—The Fed-  
15 eral Government shall not, by virtue of offering or pro-  
16 viding a prize under this section, be responsible for compli-  
17 ance by registered participants in a prize competition with  
18 Federal law, including licensing, export control, and non-  
19 proliferation laws, and related regulations.”.

20 **SEC. 9. MISCELLANEOUS AMENDMENTS.**

21 (a) RETROCESSION OF JURISDICTION.—The Na-  
22 tional Aeronautics and Space Act of 1958 (42 U.S.C.  
23 2451 et seq.) is amended by adding at the end of title  
24 III the following new section:

1                   “RETROCESSION OF JURISDICTION

2           “SEC. 316. (a) Notwithstanding any other provision  
3 of law, the Administrator may relinquish to a State all  
4 or part of the legislative jurisdiction of the United States  
5 over lands or interests under the control of the Adminis-  
6 trator in that State.

7           “(b) For purposes of this section, the term ‘State’  
8 means any of the several States, the District of Columbia,  
9 the Commonwealth of Puerto Rico, the United States Vir-  
10 gin Islands, Guam, American Samoa, the Northern Mar-  
11 iana Islands, and any other commonwealth, territory, or  
12 possession of the United States.”.

13           (b) NASA SCHOLARSHIPS.—

14           (1) AMENDMENTS.—Section 9809 of title 5,  
15 United States Code, is amended—

16           (A) in subsection (a)(2) by striking “Act.”  
17 and inserting “Act (42 U.S.C. 1885a or  
18 1885b).”;

19           (B) in subsection (e) by striking “require.”  
20 and inserting “require to carry out this sec-  
21 tion.”;

22           (C) in subsection (f)(1) by striking the last  
23 sentence; and

24           (D) in subsection (g)(2) by striking  
25 “Treasurer of the” and all that follows through

1           “by 3” and inserting “Treasurer of the United  
2           States”.

3           (2) REPEAL.—The Vision 100—Century of  
4           Aviation Reauthorization Act is amended by striking  
5           section 703 (42 U.S.C. 2473e).

6           (c) VEHICLE INDEMNIFICATION.—Section 309 of the  
7           National Aeronautics and Space Act of 1958 (42 U.S.C.  
8           458c) is amended in subsection (f)(1) by striking “Decem-  
9           ber 31, 2002” through “September 30, 2005” and insert-  
10          ing, “December 31, 2010, except that the Administrator  
11          may extend the termination date to a date not later than  
12          September 30, 2015, if the Administrator has entered into  
13          an arrangement with the National Academy of Public Ad-  
14          ministration to determine the impact on private parties  
15          and the Federal Government of eliminating this section”.

16          (d) ISS COST CAP.—Section 202 of the National  
17          Aeronautics and Space Administration Authorization Act  
18          of 2002 is repealed.

19       **SEC. 10. FOREIGN LAUNCH VEHICLES.**

20          (a) ACCORD WITH SPACE TRANSPORTATION POL-  
21          ICY.—The Administration shall not launch a mission on  
22          a foreign launch vehicle except in accordance with the  
23          Space Transportation Policy announced by the President  
24          on December 21, 2004.

1           (b) INTERAGENCY COORDINATION.—The Adminis-  
2 tration shall not launch a mission on a foreign launch vehi-  
3 cle unless the Administration commenced the interagency  
4 coordination required by the Space Transportation Policy  
5 announced by the President on December 21, 2004, at  
6 least 90 days before entering into a development contract  
7 for the mission.

8 **SEC. 11. COORDINATION WITH THE NATIONAL OCEANIC**  
9 **AND ATMOSPHERIC ADMINISTRATION.**

10           (a) COORDINATING INDIVIDUALS.—For each earth  
11 science mission undertaken by the Administration, the Ad-  
12 ministrator and the Administrator of the National Oceanic  
13 and Atmospheric Administration shall each appoint one  
14 individual to coordinate activities related to the mission  
15 and to make any appropriate plans for the mission making  
16 the transition from an Administration mission to a Na-  
17 tional Oceanic and Atmospheric Administration mission.

18           (b) COORDINATION REPORT.—Not later than Feb-  
19 ruary 15 of each year, the Under Secretary of Commerce  
20 for Oceans and Atmosphere and the Administrator shall  
21 jointly transmit a report to the Committee on Science of  
22 the House of Representatives and the Committee on Com-  
23 merce, Science, and Transportation of the Senate on how  
24 the earth science programs of the National Oceanic and  
25 Atmospheric Administration and the Administration will

1 be coordinated during the fiscal year following the fiscal  
2 year in which the report is transmitted.

3 **SEC. 12. CHARLES “PETE” CONRAD ASTRONOMY AWARDS.**

4 (a) **SHORT TITLE.**—This section may be cited as the  
5 “Charles ‘Pete’ Conrad Astronomy Awards Act”.

6 (b) **DEFINITIONS.**—For the purposes of this sec-  
7 tion—

8 (1) the term “amateur astronomer” means an  
9 individual whose employer does not provide any  
10 funding, payment, or compensation to the individual  
11 for the observation of asteroids and other celestial  
12 bodies, and does not include any individual employed  
13 as a professional astronomer;

14 (2) the term “Minor Planet Center” means the  
15 Minor Planet Center of the Smithsonian Astro-  
16 physical Observatory;

17 (3) the term “near-Earth asteroid” means an  
18 asteroid with a perihelion distance of less than 1.3  
19 Astronomical Units from the Sun; and

20 (4) the term “Program” means the Charles  
21 “Pete” Conrad Astronomy Awards Program estab-  
22 lished under subsection (c).

23 (c) **PETE CONRAD ASTRONOMY AWARD PROGRAM.**—

1           (1) IN GENERAL.—The Administrator shall es-  
2           tablish the Charles “Pete” Conrad Astronomy  
3           Awards Program.

4           (2) AWARDS.—The Administrator shall make  
5           awards under the Program based on the rec-  
6           ommendations of the Minor Planet Center.

7           (3) AWARD CATEGORIES.—The Administrator  
8           shall make one annual award, unless there are no el-  
9           igible discoveries or contributions, for each of the  
10          following categories:

11                 (A) The amateur astronomer or group of  
12                 amateur astronomers who in the preceding cal-  
13                 endar year discovered the intrinsically brightest  
14                 near-Earth asteroid among the near-Earth as-  
15                 teroids that were discovered during that year by  
16                 amateur astronomers or groups of amateur as-  
17                 tronomers.

18                 (B) The amateur astronomer or group of  
19                 amateur astronomers who made the greatest  
20                 contribution to the Minor Planet Center’s mis-  
21                 sion of cataloguing near-Earth asteroids during  
22                 the preceding year.

23           (4) AWARD AMOUNT.—An award under the  
24          Program shall be in the amount of \$3,000.

1           (5) GUIDELINES.—(A) No individual who is not  
2 a citizen or permanent resident of the United States  
3 at the time of his discovery or contribution may re-  
4 ceive an award under this section.

5           (B) The decisions of the Administrator in mak-  
6 ing awards under this section are final.

7 **SEC. 13. GEORGE E. BROWN, JR. NEAR-EARTH OBJECT SUR-**  
8 **VEY.**

9           (a) SHORT TITLE.—This section may be cited as the  
10 “George E. Brown, Jr. Near-Earth Object Survey Act”.

11          (b) FINDINGS.—The Congress makes the following  
12 findings:

13           (1) Near-Earth objects pose a serious and cred-  
14 ible threat to humankind, as many scientists believe  
15 that a major asteroid or comet was responsible for  
16 the mass extinction of the majority of the Earth’s  
17 species, including the dinosaurs, nearly 65,000,000  
18 years ago.

19           (2) Similar objects have struck the Earth or  
20 passed through the Earth’s atmosphere several times  
21 in the Earth’s history and pose a similar threat in  
22 the future.

23           (3) Several such near-Earth objects have only  
24 been discovered within days of the objects’ closest  
25 approach to Earth, and recent discoveries of such

1 large objects indicate that many large near-Earth  
2 objects remain undiscovered.

3 (4) The efforts taken to date by the Adminis-  
4 tration for detecting and characterizing the hazards  
5 of near-Earth objects are not sufficient to fully de-  
6 termine the threat posed by such objects to cause  
7 widespread destruction and loss of life.

8 (c) DEFINITIONS.—For purposes of this section the  
9 term “near-Earth object” means an asteroid or comet with  
10 a perihelion distance of less than 1.3 Astronomical Units  
11 from the Sun.

12 (d) NEAR-EARTH OBJECT SURVEY.—

13 (1) SURVEY PROGRAM.—The Administrator  
14 shall plan, develop, and implement a Near-Earth  
15 Object Survey program to detect, track, catalogue,  
16 and characterize the physical characteristics of near-  
17 Earth objects equal to or greater than 100 meters  
18 in diameter in order to assess the threat of such  
19 near-Earth objects to the Earth. It shall be the goal  
20 of the Survey program to achieve 90 percent comple-  
21 tion of its near-Earth object catalogue (based on sta-  
22 tistically predicted populations of near-Earth ob-  
23 jects) within 15 years after the date of enactment of  
24 this Act.

1           (2) AMENDMENTS.—Section 102 of the Na-  
2           tional Aeronautics and Space Act of 1958 (42  
3           U.S.C. 2451) is amended—

4                   (A) by redesignating subsection (g) as sub-  
5           section (h);

6                   (B) by inserting after subsection (f) the  
7           following new subsection:

8           “(g) The Congress declares that the general welfare  
9           and security of the United States require that the unique  
10          competence of the National Aeronautics and Space Ad-  
11          ministration be directed to detecting, tracking, cata-  
12          loguing, and characterizing near-Earth asteroids and com-  
13          ets in order to provide warning and mitigation of the po-  
14          tential hazard of such near-Earth objects to the Earth.”;  
15          and

16                   (C) in subsection (h), as so redesignated  
17          by subparagraph (A) of this paragraph, by  
18          striking “and (f)” and inserting “(f), and (g)”.

19          (3) ANNUAL REPORT.—The Administrator shall  
20          transmit to the Congress, not later than February  
21          28 of each of the next 5 years beginning after the  
22          date of enactment of this Act, a report that provides  
23          the following:

1           (A) A summary of all activities taken pur-  
2           suant to paragraph (1) for the previous fiscal  
3           year.

4           (B) A summary of expenditures for all ac-  
5           tivities pursuant to paragraph (1) for the pre-  
6           vious fiscal year.

7           (4) INITIAL REPORT.—The Administrator shall  
8           transmit to Congress not later than 1 year after the  
9           date of enactment of this Act an initial report that  
10          provides the following:

11           (A) An analysis of possible alternatives  
12           that the the Administration may employ to  
13           carry out the Survey program, including  
14           ground-based and space-based alternatives with  
15           technical descriptions.

16           (B) A recommended option and proposed  
17           budget to carry out the Survey program pursu-  
18           ant to the recommended option.

19           (C) An analysis of possible alternatives  
20           that the Administration could employ to divert  
21           an object on a likely collision course with Earth.

○