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## HOUSE JOINT RESOLUTION

WHEREAS, The United States is a nation of explorers, and exploration and discovery have been especially important to the American experience, providing vision, hope, and economic stimulus from new world explorers and American pioneers to the Apollo program; and

WHEREAS, Just as Lewis and Clark could not have predicted the settlement of the American west within a hundred years of the start of their famous 19th century expedition, the total benefits of a single exploratory undertaking or discovery cannot be predicted in advance; the desire to explore is part of our character, and history has shown that space exploration benefits all humankind through new technologies for everyday application, new jobs across the entire economic enterprise, economic contributions through new markets and commercial products, education and inspiration, United States leadership, increased security, and a legacy for future generations; and

WHEREAS, New technologies and commercial spin-offs from the advancements made through the National Aeronautics and Space Administration (NASA) programs have provided economic expansion and improved life quality to residents not only within the United States but worldwide, and some of these technologies include the following:

- (1) Image processing used in CT scanners and MRI technology came from technology developed to computer-enhance pictures of the moon for the Apollo program;
- (2) Kidney dialysis machines were developed as a result of a NASA-developed chemical process, and insulin pumps were based on technology used on the Mars Viking spacecraft;
- (3) Programmable heart pacemakers were first developed in the 1970's using NASA satellite electrical systems;

- 1 (4) Fetal heart monitors were developed from 2 technology originally used to measure airflow over 3 aircraft wings;
  - (5) Surgical probes used to treat brain tumors resulted from special lighting technology developed for plant growth experiments on space shuttle missions; and
  - (6) Infrared hand-held cameras used to observe atmospheric gas plumes in space from the space shuttles have helped firefighters point out hotspots in wild fires; and

WHEREAS, Our nation's new vision for space exploration charts a new building block strategy to explore destinations across our solar system with robots and humans which will significantly help the United States protect its technological leadership, economic vitality, and security; and

WHEREAS, Implementation of the space exploration vision will require private industry to have a larger presence in space operations and the creation of a space-based industry; and

WHEREAS, The talent, technology, and infrastructure exist in Illinois to provide resources that will be key to implementing the vision and carrying out NASA's future missions; the State of Illinois has long played a leading role in America's exploration initiatives, especially in our nation's aeronautics and space program; Illinois is home to 15 active and former astronauts, including Eugene Sernan and Mae Johnson, the first black woman in space; the State of Illinois is a leader in science and technological research, hosting federal laboratories such as Argonne National Labs and Fermi National Accelerator Laboratory, and academic research institutions such as the University of Chicago, Northwestern University, and the University of Illinois; and

- 1 WHEREAS, NASA has invested over \$100 million in direct
- 2 funding to businesses and academic institutions in the State of
- 3 Illinois over the past 5 years; and
- 4 WHEREAS, NASA funds the NASA Illinois Commercialization
- 5 Center that, alone, has had a \$23 million economic benefit to
- 6 the Illinois business community over the past 3 years by
- 7 assisting private industry in the development and
- 8 commercialization of space-based technologies; and
- 9 WHEREAS, NASA's proposed vision has the potential to expand
- NASA's economic impact in the State of Illinois, becoming a
- 11 catalyst for innovation and discovery in support of the vision
- that will contribute to local and national economic growth;
- 13 therefore, be it

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- RESOLVED, BY THE HOUSE OF REPRESENTATIVES OF THE

  NINETY-FOURTH GENERAL ASSEMBLY OF THE STATE OF ILLINOIS, THE

  SENATE CONCURRING HEREIN, That the State of Illinois support
- 17 the continuation of research and development programs in space

science missions in order to take full advantage of the

- 19 previous investments made in the space stations and other NASA
- 20 infrastructure, support NASA's goal of returning to the moon as
- 21 well as conducting excursions to Mars and beyond, and encourage
- the United States Congress to enact and fully fund the proposed
- 23 Vision for Space Exploration Program as submitted to the
- 24 Congress in the federal 2005 fiscal year budget, to enable the
- United States and the State of Illinois, in particular, to
- remain a leader in the exploration and development of space;
- 27 and be it further
- 28 RESOLVED, That the clerk transmit copies of this Resolution
- 29 to the President and Vice President of the United States, to
- 30 the Speaker of the House of Representatives of the Congress of
- 31 the United States, to the Majority Leader of the Senate of the
- 32 Congress of the United States, and to each Senator and

- 1 Representative from the State of Illinois in the Congress of
- 2 the United States.