



## Bigelow Aerospace Continues its Relationship with NASA-JSC in its Quest to Revolutionize Space Habitat Technology and Private-Sector Space Development

Bigelow Aerospace, via private funding, is developing expandable space habitats, a critical technology that will greatly enhance the nation's ability to conduct long-term, economical activities in Low-Earth Orbit for both commercial and public purposes. Expandable habitats will provide enhanced capabilities and safety, while at the same time, drastically reduce the price of space-based operations. Bigelow Aerospace believes that these next-generation habitats will form the cornerstone of a new wave of space development while enabling a variety of dynamic initiatives from exciting commercial microgravity research and development efforts to bold new exploratory and scientific missions.

Bigelow Aerospace successfully launched its first sub-scale technology demonstrator, called 'Genesis-1', this Summer. Genesis-1 was the first expandable habitat prototype placed into orbit. Subsequent to Genesis-1, Bigelow Aerospace will deploy Genesis-2, and several other sub-scale demonstrator flights over the course of the next several years.

### NASA Mission Directorate Benefit:

Bigelow Aerospace's demonstrator missions will be pathfinders in every sense of the word. If successful, Bigelow Aerospace will have proven its capability to construct and deploy advanced space hardware in a rapid and economically effective manner. Eventually, Bigelow Aerospace should be able to construct and provide low-cost, robust, full-scale space habitats. Such technology could play a vital role in achieving NASA's own long-term goals of establishing a human presence on the Moon and exploring Mars, in addition to the benefits to the domestic and global commercial sector.

The relationship between NASA-JSC and Bigelow dates back to 2002, when the two parties entered into the first in a series of Space Act Agreements (SAA). The SAAs have primarily consisted of short-term exchanges of technical personnel. The relationship was enacted in part to help give NASA-JSC employees insight and exposure to private-sector practices and efficiencies. In 2003, Bigelow Aerospace and NASA signed the first of several licensing agreements, under which Bigelow has paid royalty fees to NASA for patent rights.

### About NASA-Johnson Space Center Technology Transfer Office

The NASA-Johnson Space Center Technology Transfer Office provides a means to advance internal technologies and innovations at NASA for both space-related endeavours and commercial applications. The office is a valuable resource at NASA as a pool for useful technology and innovations. Externally, the office provides strong assistance in helping entrepreneurs, companies and investors to bring useful technology to the marketplace. For more information on current technologies, to learn more about how to license NASA-JSC technologies, or to read success stories, visit <http://technology.jsc.nasa.gov>.



*Bigelow Aerospace is developing an expandable space habitat that could help NASA achieve its goal of establishing a human presence on the Moon and in exploring Mars, as well as serving as the foundation for future private sector-driven commercial space activities.*

Since Bigelow's inception in 1999, it has relied solely on private-sector money to pursue space habitat technology. These funds have been used to construct new development, testing and fabrication facilities, as well as to hire the necessary engineers, scientists and support staff. NASA's only substantive investment thus far has been the use of a handful of technical personnel.

### Worth Noting:

With the development of its expandable space habitats, Bigelow is embarking upon a program that will utilize unique methods of procurement, fabrication, testing and deployment, unlike any previous effort in the aerospace field.

### Measurable Impact:

**License Benefit:** The SAAs and multiple licenses have played a positive role in Bigelow's effort to develop expandable space habitat technology using private-sector investments. If Bigelow Aerospace is successful in its endeavor, the resulting technology will be a significant benefit for all space activities, both public and private.

**Agreement Benefit:** The development of a promising platform for low-cost, robust, full-scale space habitats.