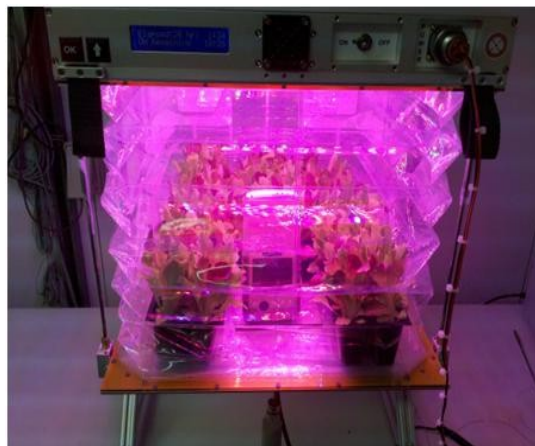


ORBITEC “grows” NASA business with two new awards

Orbital Technologies Corporation, “ORBITEC,” has been awarded two new NASA contracts for engineering support and flight hardware production related to life science activities on the International Space Station. The programs awarded were for ORBITEC to support the development and flight of the “VEGGIE” system and the Advanced Plant Habitat at the NASA’s Kennedy Space Center for the space station.

VEGGIE, an expandable and deployable vegetable system, was developed by ORBITEC to grow salad crops to supplement prepackaged foods during long stays in space. The primary goal of VEGGIE is to provide flight crews with palatable, nutritious, and safe sources of fresh food with minimal volume and operational resources. Significant, beneficial plant and life science experiments can also be conducted in the VEGGIE system. VEGGIE is designed as a very small module during flight stages and is later “unfolded” for growth operations.

Ultimately, plants have capacity for naturally converting carbon dioxide into breathable oxygen, converting water waste streams into drinkable water, and to provide food aboard Space Station and future exploration. In addition, ORBITEC recognizes the age-old adage that gardening is good for the soul. In other words, gardening can be beneficial for relaxation and recreation, possibly acting as a key contribution to improved human performance in long duration spaceflight. As evidence, astronauts on the space station, who often stay for periods of six months, have been enjoying plant experiments, which provide them with much missed greenery and can occupy valuable free time with an enjoyable task.



VEGGIE, a gardening unit for space that provides fresh, nutritious, and safe supplemental food for long-duration space travelers.

VEGGIE was one of the many spinoffs of technology developed by ORBITEC for the Biomass Production System, or BPS, a plant-growth research unit that was installed on the space station to conduct tests on growing plants in microgravity. After the successful BPS flight, discussions began at ORBITEC about innovative methods for growing plants in space to improve plant habitability with extremely reliable yet simple systems. ORBITEC observed astronaut Jim Voss on Expedition 2, the second group to live on the station, and astronaut Don Pettit during Expedition 6, the sixth tenancy of the station, attempting to grow onions and other varieties of plants in old food bags, having little success due to the lack of a proper growth medium and fertilizer. ORBITEC’s goal for

VEGGIE is a device that astronauts can take into orbit and use to grow a variety of plants for supplemental food preparation.

The second award ORBITEC received from NASA is an engineering support contract named the Payload Integration and Operational Support Services Advanced Plant Habitat, or APH. Under this contract ORBITEC will provide engineering support to NASA's Kennedy Space Center in designing, developing, certifying, and fabricating for installation on the station. This Advanced Plant Habitat Facility will provide the research community a large, environmentally controlled, growth chamber for use on the space station.

The project will be a NASA-led effort with ORBITEC providing engineering support in three proposed phases, with a total period of performance anticipated to be three years. Phase I of the effort will encompass, but not be limited to providing design support to the NASA-led design team in the form of design review, concept analysis, applications of previous lessons learned to the design effort, and supporting design review meetings. Phase II is envisioned to develop flight and ground hardware production efforts to implement the design requirements developed in Phase I. Phase II will conclude with the finished production of two Advanced Plant Habitats—a ground support unit and a flight unit ready for certification testing for implementation on the station. The final phase, Phase III, will perform the certification testing and analysis required for flight to and use on the space station. Phase III will conclude with the APH flight unit being certified for flight.

About Orbital Technologies Corporation (ORBITEC)

ORBITEC is a leading high technology development and subsystem integration company based in Madison, Wisconsin. ORBITEC offers commercially mature solutions and strong capabilities in three distinct areas: propulsion, propellant, and power systems; life support and environment control; and bio-based products and production systems. Via its spin-off company, HMA Fire LLC, ORBITEC provides state-of-the-art solutions for today's firefighters. ORBITEC has won more than \$170 million in contracts to develop state-of-the-art technologies and products from federal government agencies, large and small commercial aerospace, and other commercial industries. ORBITEC has been able to convert research and development initiatives into leading technologies and mature the technologies into valuable products in their respective markets that provide significant cost advantages, superior functionality, and high reliability. ORBITEC is led by an experienced management team with over one hundred years of industry experience. For more information on ORBITEC, visit www.orbitec.com.

For more information please contact:

Paul Zamprelli
Business Development Director
Orbital Technologies Corporation
Office: 608-229-2793
Cell: 608-630-4424
zamprellip@orbitec.com
www.orbitec.com