Arkisys™ and SpacePort Australia® Partner to Advance Crew Health Support Using Astrobee Robotics

Astrobee's existing telepresence capabilities combined with advances in remote tele-health expands crew autonomy

MOREE, NSW, AUSTRALIA, March 25, 2026 /EINPresswire.com/ -- Arkisys™, a leader in on-orbit services and space robotics operations, and SpacePort Australia® (SPA) today announced a strategic partnership to explore advanced crew health support capabilities using NASA's Astrobee free-flying robotic system aboard the International Space Station (ISS).

> Astrobee provides a unique, flight-proven platform to test how robotics can augment human capability in space," Barnhart added."
>
> *David Barnhart*

This collaboration brings together Arkisys™, appointed operational role as the commercial sustaining partner for Astrobee, with SPA expertise in remote and rural healthcare delivery. The shared goal is to enhance astronaut medical care, and clinical decision making, and aid medical autonomy, during long-duration space missions.

Originally developed at NASA's Ames Research Center, the Astrobee system has been operating aboard the ISS since 2019. Consisting of three free-flying robots—Bumble, Honey, and Queen—Astrobee was designed to support research, inspection, and crew assistance within the station's microgravity environment.

In September 2025, Arkisys™ was awarded a Space Act Agreement to sustain and maintain Astrobee operations, with a veiw to expand their commercial utilization. This partnership with SpacePort Australia® represents a new phase in extending Astrobee's capabilities into the domain of space-based healthcare.

"Expanding Astrobee into more advanced crew support roles is a natural evolution of the platform," said David Barnhart, CEO of Arkisys™. "As missions extend beyond low Earth orbit to commercial destinations, and future deep space exploration, enabling greater crew medical autonomy becomes essential. Healthcare is a critical component of that future."
The collaboration leverages Australia's leadership in remote telehealth, where medical professionals routinely operate with limited resources and distance constraints. Dr. Caswell,

Director of SpacePort Australia is a practicing physician in rural Australia, brings direct experience in delivering care in challenging environments.

“Remote healthcare is fundamentally about doing more with less—limited tools, limited support, and high stakes,” said Dr. Caswell. “Those conditions closely mirror what future crews may face in space. By integrating telemedicine and rural and remote medical care concepts with Astrobee’s mobility, and sensing capabilities, we can begin to define how medical support evolves for long-duration missions.”

The joint effort will focus on evaluating how Astrobee can serve as a “robotic assistant” for in-space healthcare applications. Potential use cases under study include:

- Delivery of medical supplies within the ISS;
- Real-time video and diagnostic support for remote physicians;
- Integration of compact diagnostic sensors and monitoring tools;
- Assistance during medical procedures as an additional “set of eyes and hands”.

Advances in miniaturized medical technologies on Earth—combined with Astrobee’s telepresence, mobility, and autonomous capabilities—create a pathway toward adaptable, in-orbit healthcare support systems.

“Astrobee provides a unique, flight-proven platform to test how robotics can augment human capability in space,” Barnhart added. “This partnership allows us to take another practical step towards enabling sustainable human presence beyond Earth.”

Initial assessments are underway to define system requirements, data pathways, and integration approaches, with the intent to present and demonstrate early concepts and technology experiments on orbit in 2027. The teams intend to present ideas and concepts to NASA’s offices for Medical, Human Health and Performance and Crew Safety to understand and maximize the utility of advancements that Astrobee’s can provide for future crew operations.

Find out more about the Astrobees visit: https://www.arkisys.com/astrobee

###
More information:
About Arkisys™:
Arkisys™, Inc., is expanding access to long-duration platforms that accelerate technology readiness and validation for commercial, government, and academic organizations through its Port Architecture in orbit. As the commercial sustaining partner for NASA’s Astrobee system, Arkisys™ supports global customers in advancing technologies from ground testing to on-orbit operations. Arkisys™ works with system and subsystem providers to integrate their technology for early validation testing on Astrobee and then transition to full space qualification operation onto autonomous Port Modules, enabling innovation in components, payloads and new missions while capturing value across the rapidly growing on-orbit services market.

For more information, visit http://arkisys.com/
About SpacePort Australia®
SpacePort Australia® research is focussed on biological solutions to space medicine issues, and advancing space access and applications from Australia. Including innovative approaches to remote operations, telemedicine, and future space-based infrastructure supporting human spaceflight.

For more information, email: contact@spaceportaustralia.com.au

Gabrielle Caswell
SpacePort Australia
+61 455 321 174
email us here
Visit us on social media:
LinkedIn
