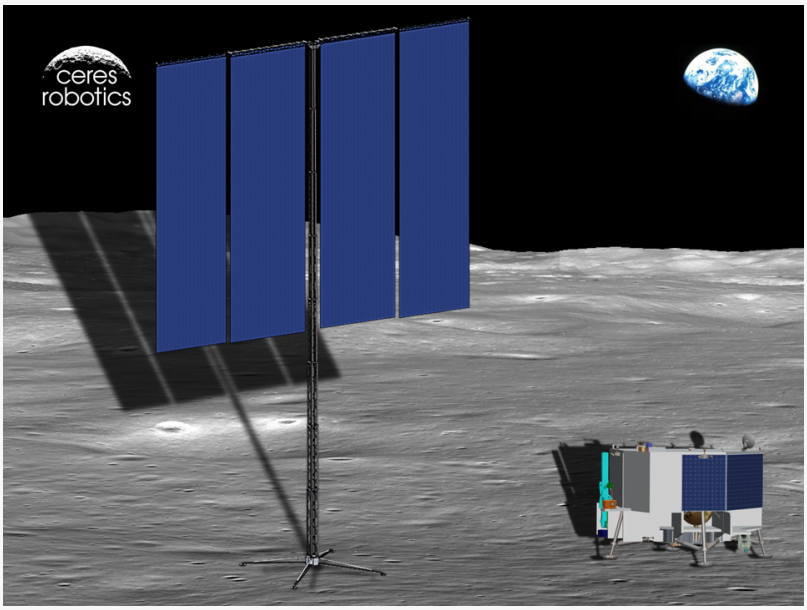
Ceres Robotics, Inc. Announces “MoonPower Lunar Grid” and wins NASA Contract

NASA funds Ceres Robotics, Inc to continue exploring Mobile Solar Stations for Power Generation on Lunar Surface



A key component of the Ceres MoonPower Lunar Grid, and also a NASA SBIR Topic, is the 50 kW-class Solar Vertical Array Technology (VSAT) shown here.

OAKLAND, CA, USA, April 26, 2024 /EINPresswire.com/ -- Concurrent with the announcement of its development-stage lunar power grid named “MoonPower”, Ceres Robotics, Inc. (‘Ceres’) is selected by NASA to develop further one of the system’s key components, a deployable-retractable truss-mast to commission 50-kW-class solar arrays on the lunar surface.

MoonPower is a lunar power generation and distribution system to support continuous robotic and human operations on the Moon. It is designed to deliver reliable and sustainable power to support lunar habitats, rovers, and construction systems for future robotic and crewed lunar missions. It is comprised of a networked array of 50 kW-Class Vertical Solar Array System called C-Towers. Earlier this week, Ceres was awarded NASA SBIR Phase II contract to further the development of key components of the C-Tower.

“C-Tower is an affordable, lightweight, and scalable solution to meeting the power demands of future lunar missions,” said Udit Shah, Principal Investigator of this SBIR and technical program lead at Ceres. “It can generate 60 kW peak power and is scalable to generate more than 240 kW peak power. We plan to sequentially establish MoonPower for multiple customers using multiple C-Towers to meet the medium-term and long-term lunar polar power demands.”

A key component of the Ceres MoonPower Lunar Grid, and also a NASA SBIR Topic, is the 50 kW-class Solar Vertical Array Technology (VSAT). The 50-kW VSAT is the second generation to the 10-kW VSAT contracts awarded in 2021 to multiple firms under NASA’s Game Changing Development project. Ceres was awarded a Phase I SBIR 50-kW VSAT contract in 2023 as part of NASA’s Artemis program, with the focus on returning humans to the Moon and supporting the power demands of establishing a sustainable presence at the lunar South Pole. As part of that

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>
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activity, Ceres worked on structures and mechanisms innovations of the C-Tower to ensure compact packaging, safe transportation in space and on the lunar surface, reliable deployment, stable operation while sun tracking, and retraction and relocation as needed. The backbone of C-Tower, which Ceres will continue to develop under the SBIR Phase II contract is a deployable-retractable lightweight truss-mast to commission solar arrays. The truss-mast extends to 23.5 m from the surface and is scalable to extend to more than 50 m. As part of the SBIR Phase II contract, Ceres has partnered with Voyager Space Exploration Systems to prototype and test the C-Tower's mast under lunar gravity environment (1/6 g).

Ceres is a commercial vendor selected by NASA to provide payload delivery services to the lunar surface through the Commercial Lunar Payload Services (CLPS) program. In support of NASA CLPS, Ceres is developing its mission configurable B5 lander bus capable of precision landing and providing NASA with end-to-end lunar payload delivery and operations services. Ceres B5 lander bus can deliver up to 500 kg payloads to the lunar surface and provides payloads with power, data, communications, articulation, and surface and orbital deployment to perform their individual missions.

"Ceres is ideally suited to support NASA's mission to return astronauts to the surface of the Moon, and ultimately Mars," said Dr. Michael Sims, founder and CEO. "We look forward to leveraging our commercial capacity to not only design and develop our proprietary MoonPower lunar grid and the C-Tower system but to one day operate on the lunar surface with our robotic lander and rover systems, providing reliable power to ourselves and our commercial and government colleagues operating on the Moon alongside us."

About Ceres Robotics, Inc

Ceres Robotics, Inc. is a new-space commercial company focused on building the tools that enable humanity to become a multi-planetary species. Ceres is disrupting the cost of carrying out planetary surface activities by combining modern technologies with lean, agile development. Ceres builds and supplies landers, rovers, surface robotics elements, and operations to enable and package full service affordable and high-impact missions in a 'Missions as a Service' model to NASA and for other customers. Ceres was founded in 2017 by NASA veteran Dr. Michael Sims and is located in California.

About Voyager Space

Voyager Space is dedicated to building a better future for humanity in space and on Earth. With

over 35 years of spaceflight heritage and over 2,000 successful missions, Voyager is powering the commercial space revolution. Voyager delivers exploration, technology, and defense solutions to a global customer base that includes civil and national security agencies, commercial companies, academic and research institutions, and more.

If you would like more information about this announcement, please contact Mr. Udit Shah, Principal Investigator of the VSAT, at udit.shah@ceresrobotics.com.

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