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SYLMAR, Calif., Aug. 26, 2009 -- Spectrolab Inc., a wholly owned subsidiary of The Boeing Company [NYSE: BA], today announced that a solar cell it manufactured has set a new world record for terrestrial concentrator solar cell efficiency. The cell can convert 41.6 percent of concentrated sunlight into electricity.

The U.S. Department of Energy National Renewable Energy Laboratory in Golden, Colo., independently tested the efficiency of the Spectrolab cell in June, validating that it surpassed the previous record of 41.1 percent held by the Fraunhofer Institute in Germany.

High-efficiency solar cells in concentrator systems require fewer cells to produce the same electrical output as conventional solar cells. They enable energy producers to generate more electrical power from typical industrial solar panels and pass on lower costs to homeowners, businesses and other end users.

"This latest record asserts Spectrolab's leadership position in high efficiency multijunction solar cells and brings the industry one step closer to achieving affordable solar electricity," said David Lillington, president of Spectrolab. "This cell is an advanced version of our lattice-matched cell technology that will be incorporated quickly and successfully into our production line. This milestone underscores our emphasis on realizing the highest efficiency cells in high-volume production."

Produced in February 2008, the new Spectrolab cell is an advanced version of the lattice-matched triple-junction technology already produced in high volumes for space and terrestrial applications at Spectrolab, which pioneered the technology more than a decade ago. The new cell incorporates multiple improvements in wafer processing to reduce metal grid shadowing and series resistance, raising the cell's overall efficiency for conversion of sunlight to electricity.

"Over the past decade, Spectrolab's efforts developing terrestrial solar cell efficiency have achieved an average improvement of approximately one percentage point per year, and we expect to continue that pace," added Lillington.

Spectrolab is the world's leading supplier of multi-junction photovoltaic solar cells, solar panels, searchlights and solar simulators and recently celebrated its 50th anniversary. Spectrolab products have powered satellites since 1958 and have contributed to the on-orbit success of numerous commercial, national security and civil space missions. Spectrolab's technological advancements have driven space solar cell efficiencies to more than 28 percent. Today, Spectrolab cells power 60 percent of all satellites orbiting the Earth, as well as the International Space Station. Spectrolab has made significant investments to meet the increasing demand of the terrestrial concentrator photovoltaic industry and expects to have an annual capacity of 300 megawatts when those investments are realized in 2010.

A unit of The Boeing Company, Boeing [Integrated Defense Systems](#) is one of the world's largest space and defense businesses specializing in innovative and capabilities-driven customer solutions, and the world's largest and most versatile manufacturer of military aircraft. Headquartered in St. Louis, Boeing Integrated Defense Systems is a \$32 billion business with 70,000 employees worldwide.

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