FOR IMMEDIATE RELEASE

Media contact:
David.Hawkins@plasmatherm.com
(727) 577-4999 ext. 1731

Expanding Device Processing Capability at NASA’s JPL

Advanced-Vacuum APEX SLR system making an impact on space exploration

ST. PETERSBURG, Fla. (Dec. 1, 2015) — A new Advanced Vacuum Apex SLR ICP (inductively coupled plasma) etch system recently installed at NASA’s Jet Propulsion Laboratory (JPL) is expanding the fabrication capabilities of the site’s Microdevices Laboratory (MDL).

The MDL continues to update its wafer-level plasma processing equipment set with this system, the sixth overall from Plasma-Therm and Advanced Vacuum, and the third in the last two years. These systems are used to make critical components for NASA explorations, including detectors to map background cosmic radiation for better understanding of the universe’s beginnings, solid-state lasers used in detection of carbon dioxide and methane on Earth, Mars and other planets, and infrared sensor arrays for terrestrial and extraterrestrial imaging.

The MDL has a multitude of both internal and external users, and thus, Apex’s ease of operation and the system’s reliability are important performance requirements. Recently, the Apex SLR and other systems were on display to the nearly 14,000 attending JPL’s annual open house. Visitors enthusiastically observed the processing technologies used to make the sensors and devices.

Industrial fabrication facilities are usually designed for mass production using a single set of standard processes. However, operations at MDL, which develops unique devices for space applications, must be much more versatile, involving research, development, and small-scale production of a broad range of devices, wafer sizes, wafer thicknesses, and material families.

The Apex SLR provides the capabilities that MDL and other research facilities need to process a variety of materials, including dielectrics, metals, polymers, compound semiconductors, and superconducting materials. The recently installed Apex system is process-qualified with fluorine-based chemistries to etch dielectrics and superconducting materials.

— MORE —
“Our relationship with NASA’s JPL goes back many years, and we are quite pleased that we continue to meet the needs of such a prestigious organization,” said Dr. David Lishan, Plasma-Therm Principal Scientist and Director, Technical Marketing. “With each system that is used to make new sensors and high-performance devices, we anticipate being part of exciting and often unexpected science — science that often dramatically changes what we know about and how we view our planet, solar system and the universe.”

About Jet Propulsion Laboratory

The Jet Propulsion Laboratory (JPL) is a federally funded research and development center and NASA field center located in Pasadena, California, United States.

The JPL is managed by the nearby California Institute of Technology (Caltech) for NASA. The laboratory's primary function is the construction and operation of planetary robotic spacecraft, though it also conducts Earth-orbit and astronomy missions. It is also responsible for operating NASA's Deep Space Network.

Among the laboratory's current major active projects are the Mars Science Laboratory mission (which includes the Curiosity rover), the Cassini–Huygens mission orbiting Saturn, the Mars Exploration Rover Opportunity, the Mars Reconnaissance Orbiter, the Dawn mission to the dwarf planet Ceres and asteroid Vesta, the Juno spacecraft en route to Jupiter, the NuSTAR X-ray telescope, and the Spitzer Space Telescope.

About Advanced Vacuum

Founded in Sweden in 1993, Advanced-Vacuum develops and supplies vacuum solutions, ranging from reliable plasma etch and deposition systems to innovative chemical pump systems to high performance thermal/vacuum environmental test chambers. Acquired in 2011 by Plasma-Therm, Advanced Vacuum provides platforms for critical research and development, prototyping, and low volume production in the areas of semiconductors, material science, component testing, and failure/yield analysis. Advanced Vacuum solutions for custom applications, upgrades, and retrofits are well known throughout the vacuum equipment industry. Please visit www.advanced-vacuum.com for more information.

About Plasma-Therm

Founded in 1975, Plasma-Therm is U.S.-based manufacturer of etch, deposition, and die-singulation systems for specialty semiconductor markets, including solid-state lighting, power, data storage, renewable energy, MEMS, photonics, wireless, photomask, and advanced packaging. Plasma-Therm’s outstanding products and customer service have been recognized for 17 years with awards in the VLSIresearch Customer Satisfaction Survey. Sales and service locations throughout North America, Europe, and Asia Pacific meet the diverse needs of Plasma-Therm’s global customer base. More information is available at www.plasmatherm.com.

###
Plasma-Therm and Advanced Vacuum systems in use at NASA’s Jet Propulsion Laboratory include VERSALINE®, left, and a new Apex SLR™ etch system, center and right. (Photographs by JPL and Plasma-Therm)