

---

**For more information, please contact:**

Steve Nelson  
Pacific Scientific Energetic Materials Company (PacSci EMC)  
snelson@psemc.com  
(661) 917-2947

**PacSci EMC Demonstrates First Ever Successful Orbital Maneuvers and Orbit Raising of a CubeSat Using a Commercial Solid Rocket Motor Array**

**CHANDLER, Ariz., September, 2017** — Using its Modular Architecture Propulsion System (MAPS™) technology, PacSci EMC successfully fired a series of solid rocket motors to both point and significantly change PACSCISAT's orbital velocity. The MAPS system provides fine slewing and pointing attitude control in all three axes and a robust orbit raising capability with greater than 50 meters per second of delta V in a 1U form factor. This capability can be scaled based on mission requirements and can be custom fit for a wide range of interfaces and exterior surfaces minimizing impact on satellite internals. MAPS can be used on CubeSats and SmallSats for attitude control, deorbit, drag makeup, and plane and altitude changes.

"All motor firings repositioned PACSCISAT exactly as predicted by orbital models and our control electronics functioned flawlessly during the entire mission", said Greg Scaven, PacSci EMC's president. "Due to our success, we are excited to announce that our MAPS technology is now commercially available to satellite manufacturers and operators."

MAPS is a scalable array of high performance, sealed, solid propellant rocket motors which provide propulsion capability for CubeSats, SmallSats and small upper stages. MAPS has no tanks, valves, tubing or heaters making it a "plug and play", bolt-on design. MAPS has a 10+ year on-orbit lifetime, can be almost instantly activated, uses very low power, has three independent inhibits against firing, and provides variable thrust by firing in pairs, triples, quads, etc. MAPS is adaptable & scalable and fits in unused separation system or other spacecraft real-estate. MAPS may be configured as a standalone system or with an integral guidance, navigation and control (GN&C) system.

The PACSCISAT satellite with its PacSci EMC MAPS payload was successfully built and operated by Tyvak, a Terran Orbital Corporation. It was launched on June 22, 2017 on the Polar Satellite Launch Vehicle flight C38 (PSLV-C38) from the Satish Dhawan Space Centre in India.

**ABOUT PACIFIC SCIENTIFIC ENERGETIC MATERIALS COMPANY LLC (PacSci EMC):**

PacSci EMC provides pyrotechnic and energetic material devices and integrated systems that operate precisely the moment they are commanded – down to the millisecond. The safe and reliable operation of our products drives PacSci EMC from development, design and testing to manufacturing and final assembly. From critical systems such as aircraft emergency safety systems to sequencing systems for strategic and tactical missiles, our components can be found in hundreds of applications. Our innovations in environmentally conscious energetic materials along with our propulsion and sequencing systems are a result of over 65 years of experience working for customers in commercial aerospace, military, space, oil and gas, and law enforcement.

###