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PacSci EMC Proves Propulsion Technology on Demonstrator Satellite

PACSCISAT establishes flight heritage for new spacecraft propulsion technology

CHANDLER, Ariz., August 4, 2017 — <u>PacSci EMC</u> successfully completed propulsion technology tests with its on-orbit technology demonstrator satellite, PACSCISAT, on August 1, 2017. Over the past month of continuing on-orbit operations in a 515 km, sun-synchronous, polar orbit, PacSci EMC successfully passed built-in-tests (BIT) on both its primary and redundant <u>Smart Energetics Architecture (SEATM)</u> sequencing system and devices and fired Modular Architecture Propulsion System (MAPSTM) rocket motors. MAPS precision impulse rocket motors changed PACSCISAT's orbital velocity and altitude exactly as predicted by orbital models.

"This phase of the mission proved that our MAPS technology performs reliably and precisely as commanded and is now at technology readiness level 9 (TRL-9)", said Greg Scaven, PacSci EMC's president. "Our goal with this mission was to answer the question 'has MAPS flown in space before?' and now the answer is yes. We believe our MAPS technology will be a game changer for the NewSpace market providing very precise and predictable orbital maneuvering capability for CubeSats, SmallSats and small upper stage systems."

MAPS is an array of high performance, sealed, solid propellant rocket motors which extends the orbital life of CubeSats, SmallSats and provides propulsion capability for small upper stages. MAPS can be used for orbital maneuvers and deorbit with very precise and predictable delivered impulse and has no tanks, valves, tubing or heaters making it a "plug and play", bolt-on design. MAPS is instant on with 10+year life, 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.

PacSci EMC products are used in all phases of vehicle flight beginning with ground-based operations through lift-off/boost, solid rocket booster jettison, payload fairing separation, booster separation, second stage flight, payload separation and flight termination.

PACSCISAT successfully built and commanded by Tyvak, a Terran Orbital Corporation, with its PacSci EMC MAPS payload, 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.