



## **ESAERO ANNOUNCES NASA X-57 PROJECT MILESTONE**

**THE 'MAXWELL' TOOLING FUSELAGE ARRIVES IN SAN LUIS OBISPO**

### **FOR IMMEDIATE RELEASE:**

**SAN LUIS OBISPO, CA, December 13<sup>th</sup>, 2017** - Empirical Systems Aerospace, Inc. (ESAero) announced today a key NASA X-57 project milestone, the arrival of the 'Maxwell' tooling fuselage at ESAero's manufacturing and integration facility in San Luis Obispo, CA. ESAero will conduct the parallel processes of fit check and integration of the X-57 Mod III wing, power, and instrumentation systems. Concurrently, the original flight fuselage will undergo Mod II flight test at NASA Armstrong in 2018.

ESAero's actions are to perform fit check and integration procedures in parallel with the Mod II flight test will conserve up to 5 months of schedule from the project timeline, enabling Mod III flights to happen earlier in the program. The team plans to demonstrate an energy efficiency improvement of five (5) times over normal cruise profiles.

The new, X-57 Mod III wing is an all-composite, purpose-built, high-aspect ratio wing designed and fabricated as a collaboration between ESAero, NASA, and another small business, Xperimental, LLC. During the project, the wing will be outfitted with two large, electric cruise motors and twelve small electric motors for enhanced takeoff and landing performance. The fuselage will contain approximately eight hundred (800) pounds of batteries and structure to power the full X-57 electric propulsion system.

"This tooling fuselage significantly reduces overall project duration by giving engineers at ESAero and Xperimental the opportunity to perform critical experimental wing integration tasks while NASA engineers flight test the Mod II configuration at the same time," said Tom Rigney, NASA X-57 Project Manager. "One of our key goals is to overcome the many challenges associated with integrating these new all-electric technologies and to flight test them as soon as possible. This fuselage helps us to achieve this essential goal." said Rigney. "We want to quickly provide lessons learned to the aviation industry to help them to develop and safely fly new all-electric and hybrid-electric aircraft that have so many potential benefits."

ESAero is working very closely with NASA and the Federal Aviation Administration to provide information and lessons learned that will be used to help define the certification basis for electric vehicles. Currently, there is not a clear path to certification for electric motors, controllers, primary batteries, and power systems of this magnitude. With development of the X-57, ESAero and NASA are helping pave the way for the future of safe, certified electric flight.



X-57 Tooling Fuselage at Empirical Systems Aerospace, Inc.

Photo Credit: ESAero

### **About Empirical Systems Aerospace, Inc. (ESAero)**

Since 2003, Empirical Systems Aerospace, Inc. (ESAero), an aerospace engineering design and manufacturing company, has served the needs of the aerospace industry through its work on military and commercial conceptual air vehicle designs, electric and hybrid propulsion system development, aircraft modifications, sub-scale technology demonstrators, rapid system prototyping, design for manufacturing, low-rate initial production, manufacturing, and engineering support. ESAero is the Prime Contractor and Integrator of the NASA X-57 "Maxwell" all-electric airplane. ESAero customers include multiple NASA Centers, AFRL, AMRDEC, Lockheed Martin, General Atomics, Electricore, and AeroVironment. With a 32,200-square foot design & manufacturing facility located in San Luis Obispo, California and an 8,000-square foot integration and test location at the Oceano County Airport (L52), ESAero has expanded operations and takes full advantage of available airport space for system testing and product development. ESAero will continue to provide the aviation and aerospace industries with cutting-edge systems solutions and optimized manufacturing practices. For more information, please visit our website, [www.esaero.com](http://www.esaero.com).

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