

# Momentum and OrbAstro Announce Service Agreement for 3U In-Orbit Demonstration

Agreement between two International newspace pioneers will enable tiny satellites to operate in large flocks

June 4th, 2020 – Santa Clara, CA -- Momentum ([www.momentum.space](http://www.momentum.space)), provider of in-space transportation services for satellites, and OrbAstro, a UK company focused on developing the technology to enable tiny satellites to operate in large flocks, announced today a launch contract to fly a 3U to SSO onboard the SpaceX Dedicated rideshare mission in 2021.

This in-orbit demonstration mission on a 3U OrbAstro platform will host a variety of payloads:

- An Ultrascale+ based onboard computer, 10X more powerful than the current state-of-the-art in Zynq 7030 based systems, coupled to an Artificial Neural Network based constellation management system
- An Electrical Power System with a novel battery chemistry, allowing typically a 5X increase in mission lifetime compared to conventional Li-ion chemistries for a given volume and mass
- A compact ADCS allowing for fast steering and accurate pointing, tailored for precision formation-flight
- A new type of thermal management system, allowing kW-class payloads to operate on nanosatellite-class platforms at a compelling duty cycle

Smallsat flocking is relevant to existing and emerging markets in newspace. OrbAstro believes there is much needed room for improvement in constellation-level efficiency, so the new company is developing the onboard hardware and software to close the gap. The company is focused on launching its own flocks as well as innovating in hardware and software for space.

“Following this IOD, we expect to launch a small cluster of formation-flying nanosatellites to de-risk all remaining technologies under development before scaling up to our constellation aspirations, said Dr. Ash Dove-Jay, Founder and CEO, OrbAstro. “Momentum strikes us as an ideal partner going forwards - their flexible approach, large launch manifest, and ability to transfer us to a nominal orbit is unmatched.”

“We are excited to see OrbAstro working on developing key technologies that could really enable flocks of satellites to be in close proximity to each other,” said Mikhail Kokorich, CEO of Momentum. “In the future, this may enable Momentum to do rendezvous and proximity ops for refueling, satellite servicing, repositioning and more.”

A graduate of the prestigious Y Combinator program and based in Santa Clara, California, Momentus announced a \$25.5MM Series A raise last year, bringing total funding to nearly \$50M. Momentus employs new and proprietary technologies, including water plasma propulsion to enable revolutionary low cost orbital shuttle and charter services. The prototype of the Vigoride vehicle, “El Camino Real”, was launched and tested last year. The first full-scale Vigoride test mission is planned for Q4 of 2020 on the SpaceX dedicated rideshare mission.

### **About Momentus**

Momentus is the first company providing in-space transportation services for satellites. The company was founded in 2017 in Santa Clara, CA. Momentus designs and builds transfer vehicles propelled by proprietary microwave water plasma thrusters. The vehicles ferry satellites to a custom orbit after they are delivered by conventional rockets to their initial orbit. Momentus is a 50 person team growing rapidly.

For more information visit <http://www.momentus.space>

### **About OrbAstro**

OrbAstro is focused on enabling tiny satellites to operate in large flocks. This manifests itself as onboard hardware/software plugged into each satellite within a flock or constellation that directly tackles key pain-points at the mission-level. This includes autonomous formation-flight from deployment to deorbit, autonomous mission and space-traffic management, operational lifetime of a mission, and consistency of mission performance over its lifetime. OrbAstro kicked off in late 2018 and is based in Oxfordshire, UK. The company has not yet needed to raise external private investment.

For more information visit <http://orbastro.com/>