



**For Masten**

Meagan Crawford

[MCrawford@Masten.aero](mailto:MCrawford@Masten.aero)

**For Psionic**

Lee Wright

[Lee@Psionic.ai](mailto:Lee@Psionic.ai)

469-233-7712

## **Masten Space Systems Selects Navigation Doppler Lidar from Psionic for CLPS Lunar Landing Masten Mission 1**

**Navigation Doppler Lidar chosen for high accuracy and long NASA heritage**

**MOJAVE, CA and HAMPTON, VA, November 17, 2020**—Masten Space Systems today announced that they have selected Navigation Doppler Lidar (NDL) from Psionic for their mission to the South Pole of the Moon in 2022. The NDL will be the primary navigation sensor working with the Masten Guidance, Navigation, and Control (GN&C) system to ensure a safe, precise landing.

“We are excited to be part of NASA’s Commercial Lunar Payload Services (CLPS) program to return to the Moon,” said Sean Mahoney, CEO of Masten Space Systems. “We selected NDL because of NASA’s 10+ years of investment in developing the technology to deliver the precision necessary for safe landings in challenging environments. Our test flight this September confirmed once again the performance of NDL.”

The Masten NDL unit will be built by Psionic, which is NASA’s licensee for the underlying patents for NDL. This will be the third NASA-designed NDL to help robotic spacecraft land on the Moon. Two other CLPS missions in 2021 will use the NASA Langley NDL.

“The accuracy and confidence NDL provides is critical given where these missions are headed,” according to Steve Sandford, founder and CTO of Psionic. “Current landing ellipses are measured in kilometers. With NDL, precision landing ellipses of less than 100 meters are possible.”

In April 2020, NASA awarded a \$76 million contract to Masten under its Commercial Lunar Payload Services (CLPS) initiative as part of the agency’s Human Landing Services (HLS) program. Masten will deliver nine NASA-sponsored science and technology instruments to the Moon’s South Pole in 2022 to help lay the foundation for human expeditions to the lunar surface beginning in 2024.

NDL provides unprecedented ground-relative range and velocity-vector accuracies, precise vehicle coordinates, ground speed, and other measurements necessary for safe, pinpoint landings, which are critical in narrowly-defined landing zones such as those at the South Pole.

### **About Masten Space Systems**

Mojave, California-based Masten Space Systems wrangles rocket powered landing from sci-fi into reality, connecting the steps from napkin, to lab, to test site, and all the way to the surface of the Moon. For over 15 years the Masten team has torn down barriers to space, working with partners of all types to create value in the space ecosystem. Masten is the partner of choice for fellow innovators, and explorers who are changing how we access and use space, bringing the benefits of space to the benefit of humans here on Earth.

[www.masten.aero](http://www.masten.aero)

### **About Psionic**

Psionic Doppler Lidar provides advanced navigation for Space exploration and Defense applications in challenging environments. The company, based in Hampton, Virginia, was founded in 2016 by the engineers and scientists who worked on Doppler Lidar at NASA for more than a decade.

[www.psionic.ai](http://www.psionic.ai)

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