National Aeronautics and Space Administration

Lyndon B. Johnson Space Center

JENNIFER MADSEN – BIOGRAPHY

Deputy Manager, Orion Avionics, Power, and Software Office, Orion Program

Education:

B.S. Aerospace Engineering, University of Illinois Urbana-Champaign
M.S. Electrical Engineering, University of Houston
PhD. Electrical Engineering, University of Houston

Jennifer Madsen currently serves as deputy manager of the Orion Avionics, Power, and Software (APS) Office for NASA's Orion Program at the agency's Johnson Space Center in Houston. In this role, she assists in the design, development, test, verification, and certification of avionics, power, and software systems onboard Orion, NASA's next generation human-rated spacecraft for Artemis missions. Madsen also serves as a lead of the Orion Mission Evaluation Room (MER) that will provide real-time engineering support during Artemis II flight operations.

Previously, Madsen served as deputy chief of Johnson's Project Management and Systems Engineering Division, providing oversight for large cross-center projects, implementing processes and standards for the Engineering Directorate. She also served as the Orion avionics and software test systems manager, leading the execution of integration and verification testing of Artemis hardware and software.

Prior to that, Madsen held several leadership roles within Orion Guidance, Navigation and Control (GN&C), including GN&C integration and test lead, where she managed software verification and integration with the Orion spacecraft. She also served as the ESA (European Space Agency) service module integrated GN&C analysis lead, collaborating with international partners to ensure system integration while supporting requirement validation testing on Orion.

Earlier in her career, Madsen served as GN&C lead for both the Max Launch Abort System Team and Commercial Crew Development Program. In her role with the Max

Launch Abort System Team, she contributed to design reviews and flight readiness reviews for the Max Launch Abort System's flight test. She also served as Orion ascent abort GN&C system manager, assisting in the development of the Ascent Abort Mission Operations and Development (MODE) Team.

From 2003 to 2007, Madsen served as space shuttle ascent/entry trainer (AET) development lead, working with the Flight Crew Operations Division, Training Division, and Flight Design and Dynamics Division to develop requirements for a PC-based space shuttle cockpit display and input devices. She also served as the space shuttle cockpit avionics upgrade integration lead, supporting the Shuttle Abort Flight Management Team in designing upgraded cockpit displays.

Madsen began her career at Johnson as cooperative education engineering student, eventually joining NASA full time in 2000 as a control system design engineer for the X-38 prototype crew return vehicle.

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