NASA launching robotic explorer to moon from Va.

September 6 2013, by Marcia Dunn

This image provided by NASA shows the Lunar Atmosphere and Dust Environment Explorer aboard a Minotaur V rocket after a rollout at NASA's Wallops Island test flight facility in Wallops Island, Va., Thursday Sept. 5, 2013. The LADEE spacecraft is set to launch from Wallops Island Friday evening. NASCAR fans in Virginia will have an opportunity to learn about an upcoming NASA mission to the moon during races at Richmond International Raceway. NASA's Langley Research Center says education specialists will be at Richmond International Raceway on Friday and Saturday. (AP Photo/NASA, Patrick Black)

NASA is poised to return to the moon.

An unmanned rocket is scheduled to blast off late Friday night from Virginia with a robotic explorer that will study the lunar atmosphere and dust. Called LADEE (LA'-dee), the moon-orbiting craft will measure the thin lunar atmosphere.

Scientists want to learn the composition of the moon's ever-so-delicate atmosphere and how it might change over time. Another puzzle: whether dust actually levitates from the lunar surface.

Unlike the quick three-day Apollo flights to the moon, the Lunar Atmosphere and Dust Environment Explorer, or LADEE, will take a full month to get there. An Air Force Minotaur rocket, built by Orbital Sciences Corp., is providing the ride from NASA's Wallops Flight Facility. It's the first moonshot from Virginia.

Launch time is 11:27 p.m. EDT.