



## Lunar CRater Observation and Sensing Satellite

### NASA teams with students for LCROSS Mission!!!

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The Lewis Center for Educational Research has a once in a lifetime opportunity to team up with NASA by tracking and monitoring NASA's Lunar CRater Observing and Sensing Satellite (LCROSS) during its journey to the Moon. The students will provide data to the LCROSS mission operations team. LCROSS is a NASA lunar mission currently scheduled for launch in May of 2009. This partnership will allow students to interact with NASA Scientists. This collaboration will inspire the youth to reach for the stars and beyond. Students will be motivated and encouraged to be the next scientist, the next astronaut, and the next hero!

During the LCROSS mission, which will last several months, participating students will help observe the condition and position of the spacecraft by tracking its signal. The LCROSS mission will benefit from the additional coverage provided by the GAVRT students. The students will be able to listen to the spacecraft for a longer period of time because of the GAVRT Program. GAVRT students have the chance to be a part of an actual NASA space mission. As LCROSS makes a series of looping orbits around the Earth before impacting the lunar surface, students will enhance and offer support to spacecraft telemetry data received by the LCROSS mission operations team. Students will serve as real team members controlling a huge, 34-meter radio-antenna to gather and interpret data that will be reported back to LCROSS mission operations. If the students identify an error with the spacecraft, they will notify the LCROSS mission team immediately. Also, if the spacecraft is present during times when the signal is not supposed to be transmitting, the students can report back to LCROSS mission operations. This gives students a very important role in the LCROSS Mission.

The reason for LCROSS is to look for water on the Moon. Other spacecraft have already determined that there is a lot of hydrogen near the Moon's poles, and LCROSS will determine whether or not the hydrogen is in the form of water (hydrogen atoms combined with oxygen). The satellite will direct an impactor to a crater on one of the lunar poles. The debris in the plume will then be analyzed. Teachers and students around the world will have the same opportunity to participate in the mission through the Lewis Center's Goldstone Apple Valley Radio Telescope (GAVRT) Program. Even home schooled students have the chance to be a part of this mission. Students are NASA's future. LCROSS is an outstanding opportunity for people to relate to NASA. LCROSS will start a new appreciation for space exploration. Students will be motivated and inspired to learn more about science, and potentially go into a science field for a career. The chance for students to interact with and work with NASA team members is astonishing! Hopefully, this mission will be the first of many more to come. Today's students are tomorrow's astronauts!



GAVRT – Goldstone Apple Valley Radio Telescope Program  
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