

THE PLANETARY SOCIETY BLOG

By Emily Lakdawalla

LRO HAS ARRIVED IN FLORIDA; LCROSS HAS SHIPPED

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A pile of pictures at the [Kennedy Space Center Media Gallery](#) documents the safe arrival of [Lunar Reconnaissance Orbiter](#) at Astrotech, the private company where it'll undergo its final assembly and testing. As of this moment there's 22 photos of LRO there; the most recent ones document the inspection of the solar arrays before their installation. Kennedy will likely have a heading in the Media Gallery for LRO soon, but in the meantime, just use their search tool to search for "lunar reconnaissance orbiter."

In related news, NASA issued a press release stating that [LCROSS](#), the much smaller spacecraft that is hitching a ride with LRO to the Moon, has just shipped from its birthplace, Northrop Grumman in Redondo Beach, just a few miles down the road from me. It has a longer road trip ahead of it than LRO had, but pretty soon will be meeting its partner in Florida for the first time.

Lunar Reconnaissance Orbiter and LCROSS are the last to launch in the series of four international missions that caused The Planetary Society to announce the start of the [International Lunar Decade](#). What, you may be asking, will these two missions add to the data that [Chandrayaan-1](#), [Chang'e 1](#), and [Kaguya](#) have sent home (never mind the previous lunar missions)?

Well, here's one thing. Every time a new lunar spacecraft launches, I get a half dozen emails from people asking me if *this* spacecraft will send us photos of Apollo and earlier hardware sitting on the surface of the Moon. To date, my answer has always been "no." Kaguya did return images showing what they believe is the blast zone left behind by the descent thrusters of the Apollo 15 lander, but that's the best we've got so far, because none of the spacecraft that have journeyed to the Moon since Apollo has had a high-resolution enough camera that got close enough to any of the landing sites to actually resolve our tiny human-built artifacts sitting on the surface.

Lunar Reconnaissance Orbiter will change that. It carries the Lunar Reconnaissance Orbiter Camera or LROC, built by Malin Space Science Systems but led by Mark Robinson at ASU; it'll be kind of like HiRISE on the Moon, producing 10,000-pixel-wide images with half-meter resolution. (That's not *quite* as fine as HiRISE is capable of getting, but it's pretty close, and if I'm not mistaken it's more than an order of magnitude better than any previous lunar camera.) That's plenty of resolution to get you photos of hardware sent from Earth, particularly the large Apollo landers, rovers, etc. And these aren't just vanity shots; one of the main reasons to fly LROC is to support future human exploration of the Moon, which means imaging potential new landing sites, but also studying the old ones with modern equipment to see what they look like from space and maybe even to see if we can spot any changes with time.

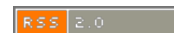
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