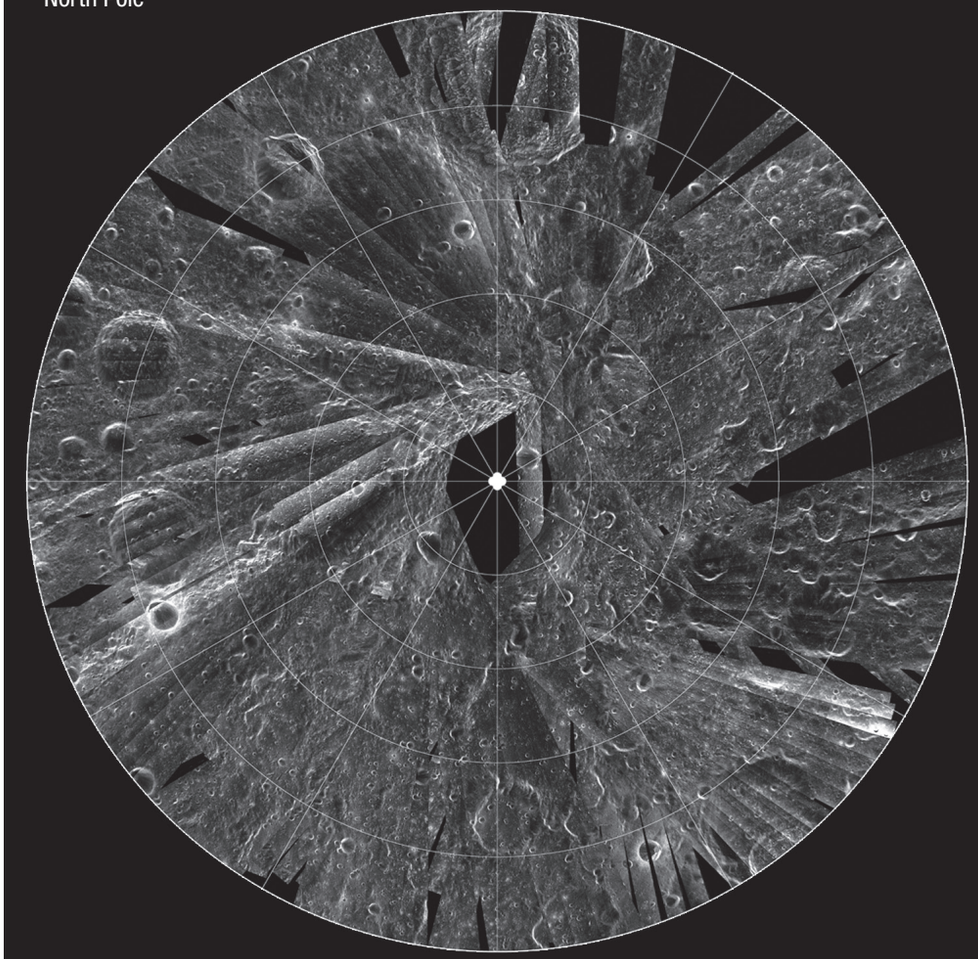
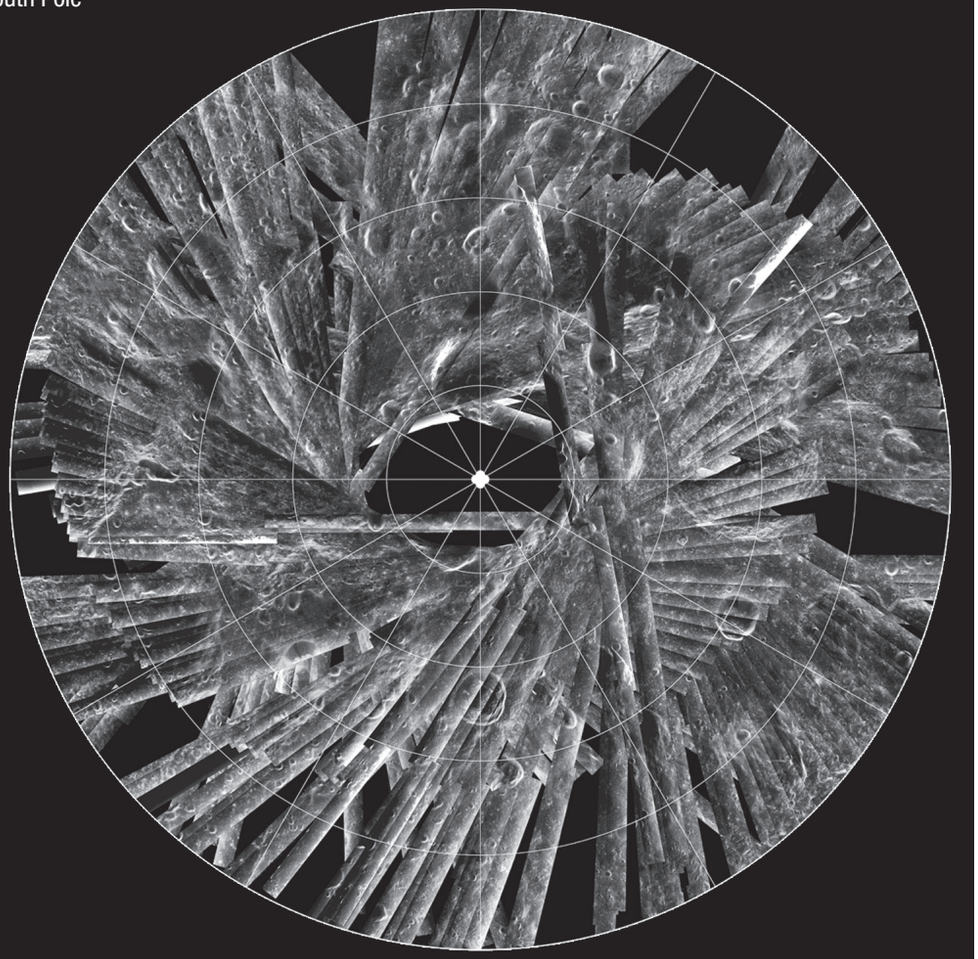
National Aeronautics and Space Administration

North Pole



South Pole



Lunar-polar mosaics showing data collected by Mini-RF on Chandrayaan-1 during its first imaging season. The mosaics cover within 10° latitude of each pole.

Mini-RF *NASA's Next Leap in Lunar Exploration*

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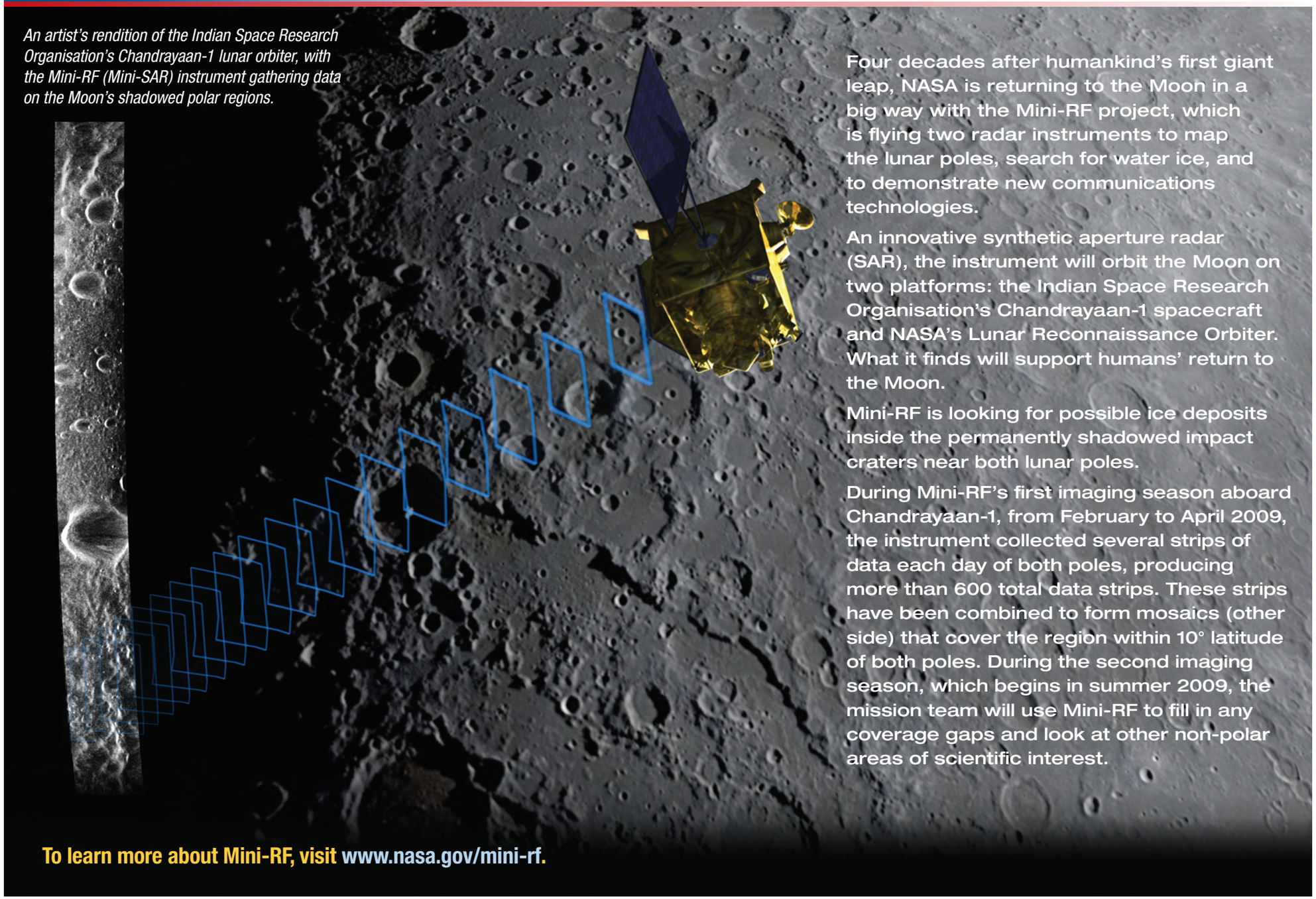

An artist's rendition of the Indian Space Research Organisation's Chandrayaan-1 lunar orbiter, with the Mini-RF (Mini-SAR) instrument gathering data on the Moon's shadowed polar regions.

Four decades after humankind's first giant leap, NASA is returning to the Moon in a big way with the Mini-RF project, which is flying two radar instruments to map the lunar poles, search for water ice, and to demonstrate new communications technologies.

An innovative synthetic aperture radar (SAR), the instrument will orbit the Moon on two platforms: the Indian Space Research Organisation's Chandrayaan-1 spacecraft and NASA's Lunar Reconnaissance Orbiter. What it finds will support humans' return to the Moon.

Mini-RF is looking for possible ice deposits inside the permanently shadowed impact craters near both lunar poles.

During Mini-RF's first imaging season aboard Chandrayaan-1, from February to April 2009, the instrument collected several strips of data each day of both poles, producing more than 600 total data strips. These strips have been combined to form mosaics (other side) that cover the region within 10° latitude of both poles. During the second imaging season, which begins in summer 2009, the mission team will use Mini-RF to fill in any coverage gaps and look at other non-polar areas of scientific interest.

To learn more about Mini-RF, visit www.nasa.gov/mini-rf.