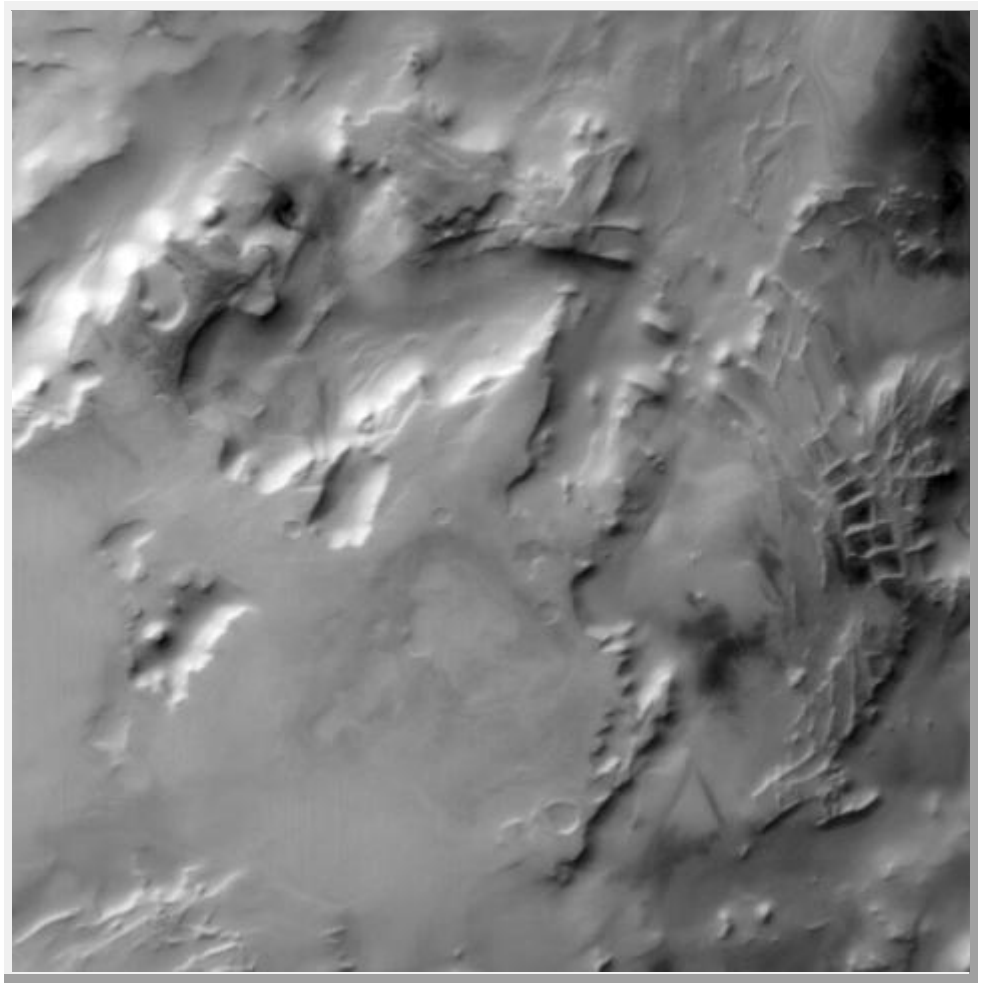
COSMIC SECRETS
The Enigmas on Mars 24

Mars Global Surveyor
"INCA CITY"
MOC wide-angle image E09-00186



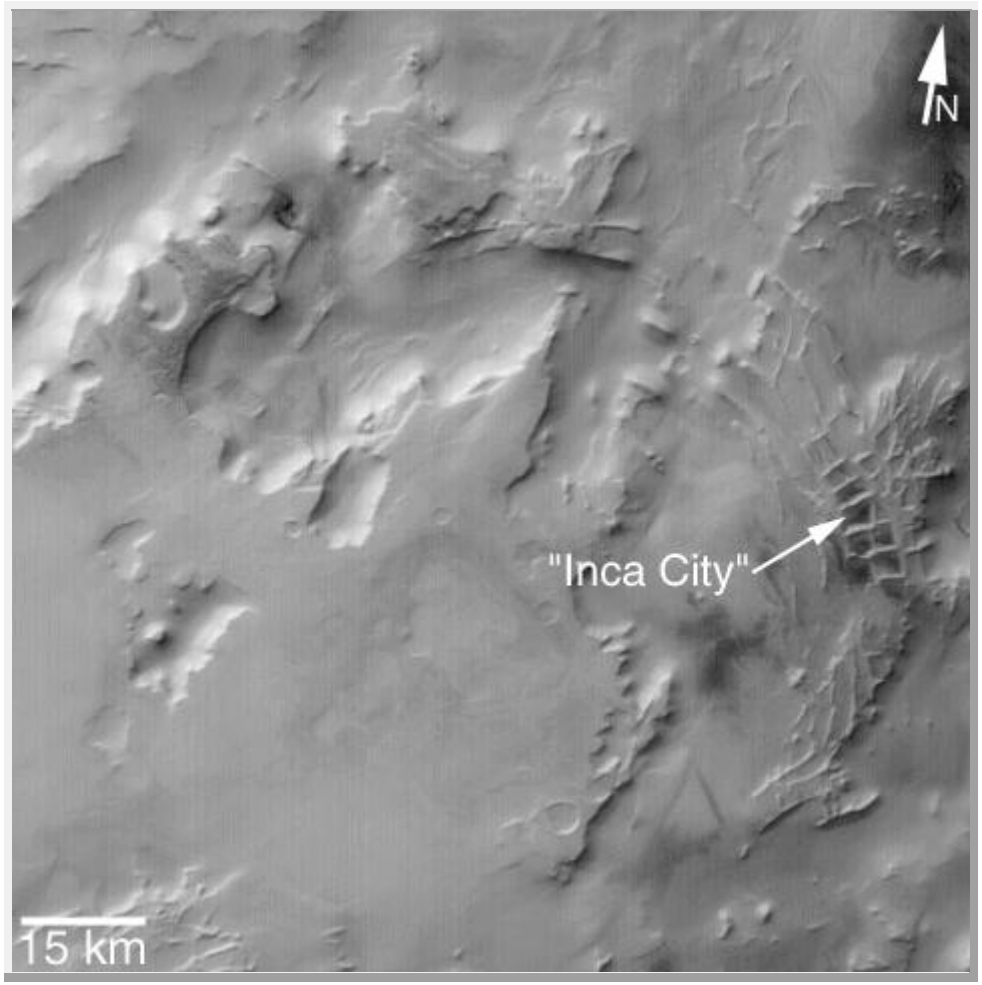
Images Credit: NASA/JPL/Malin Space Science Systems

Malin Space Systems: E09-00186.gif

In this image you can see that the 'Inca City' appears to be buried in sand. From this view you can make out the circular pattern. The 'circular wall' in the upper left continues across gullies and rises. It would be interesting to dig at this location.

"Inca City" is Part of a Circular Feature

MGS MOC Release No. MOC2-319, 8 August 2002

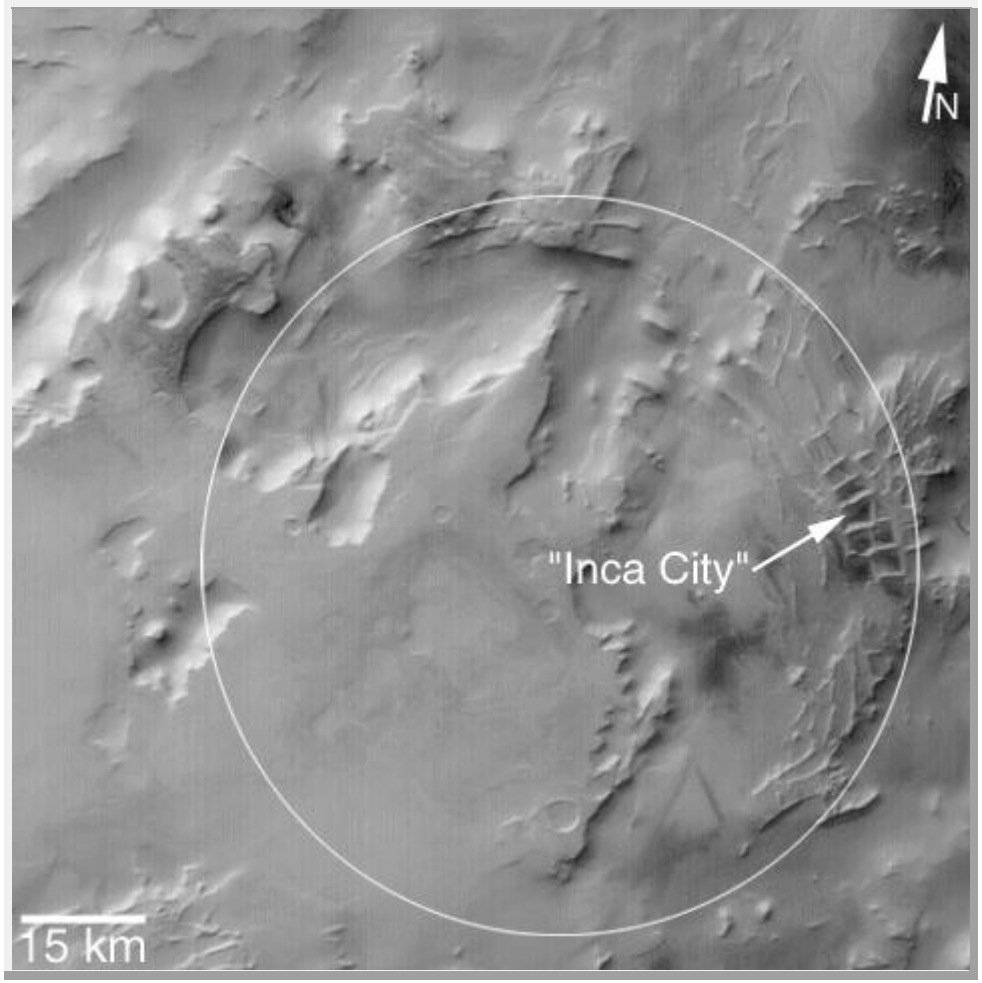


Images Credit: NASA/JPL/Malin Space Science Systems

Malin Space Systems

"Inca City" is the informal name given by Mariner 9 scientists in 1972 to a set of intersecting, rectilinear ridges that are located among the layered materials of the south polar region of Mars. Their origin has never been understood; most investigators thought

they might be sand dunes, either modern dunes or, more likely, dunes that were buried, hardened, then exhumed. Others considered them to be dikes formed by injection of molten rock (magma) or soft sediment into subsurface cracks that subsequently hardened and then were exposed at the surface by wind erosion.



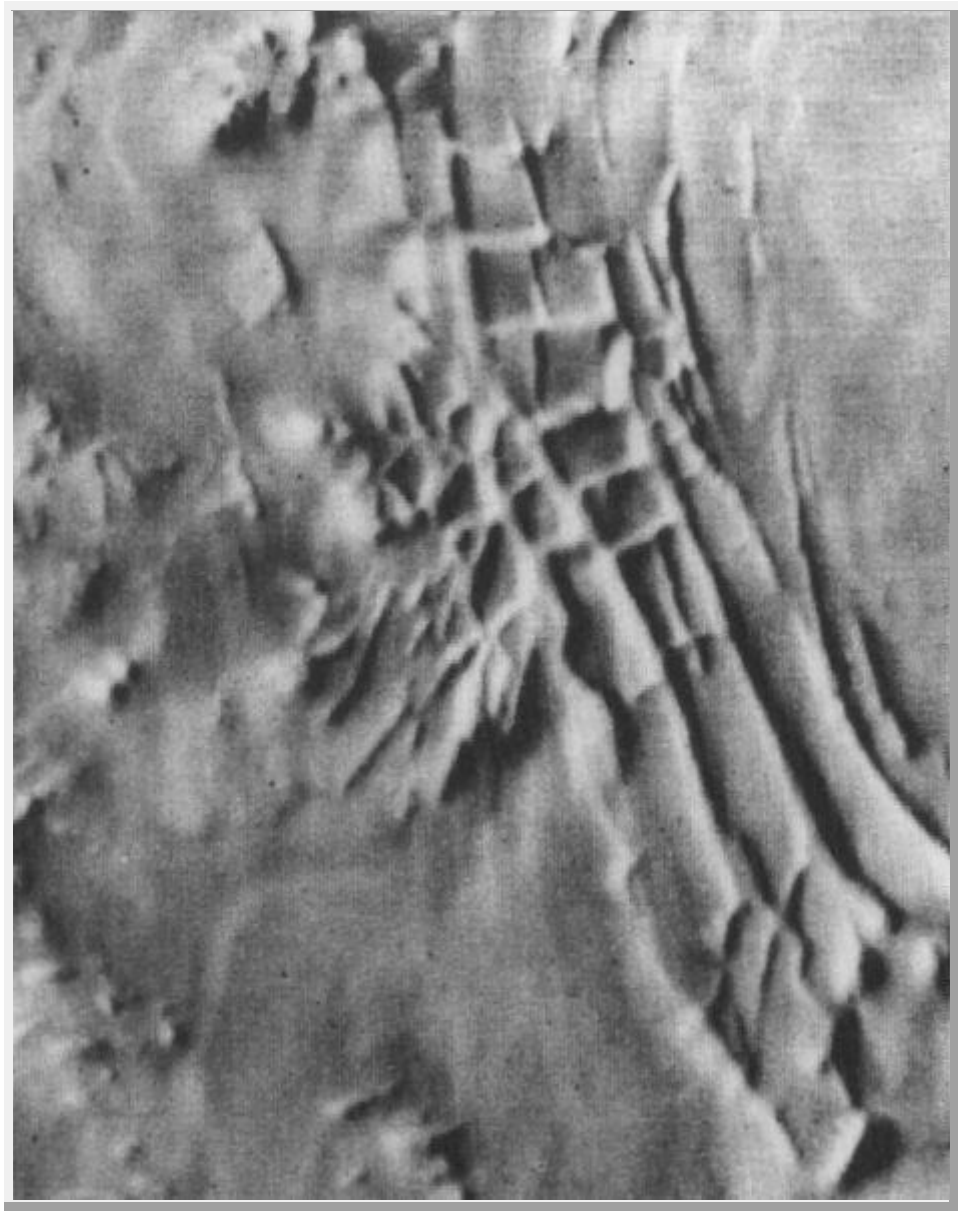
Images Credit: NASA/JPL/Malin Space Science Systems

The Mars Global Surveyor (MGS) Mars Orbiter Camera (MOC) has provided new information about the "Inca City" ridges, though the camera's images still do not solve the mystery. The new information comes in the form of a MOC red wide angle context frame taken in mid-southern spring, shown above left and above right. The original Mariner 9 view of the ridges is seen at the

center. The MOC image shows that the "Inca City" ridges, located at 82?S, 67?W, are part of a larger circular structure that is about 86 km (53 mi) across. It is possible that this pattern reflects an origin related to an ancient, eroded meteor impact crater that was filled-in, buried, then partially exhumed. In this case, the ridges might be the remains of filled-in fractures in the bedrock into which the crater formed, or filled-in cracks within the material that filled the crater. Or both explanations could be wrong. While the new MOC image shows that "Inca City" has a larger context as part of a circular form, it does not reveal the exact origin of these striking and unusual martian landforms.

Mariner 9

"INCA CITY"



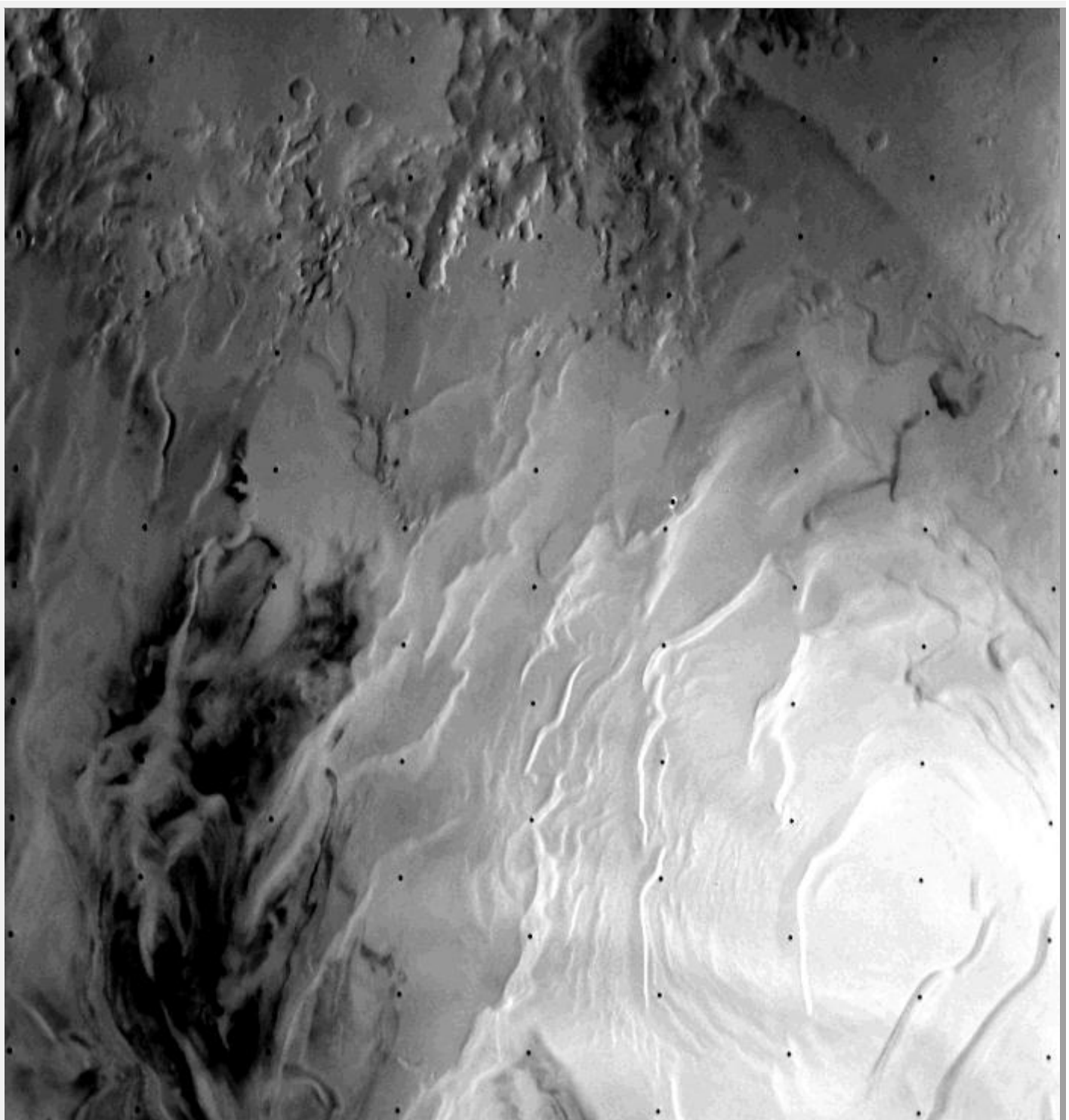
Images Credit: NASA/JPL/Malin Space Science Systems

NASA Frame Number 4212-15

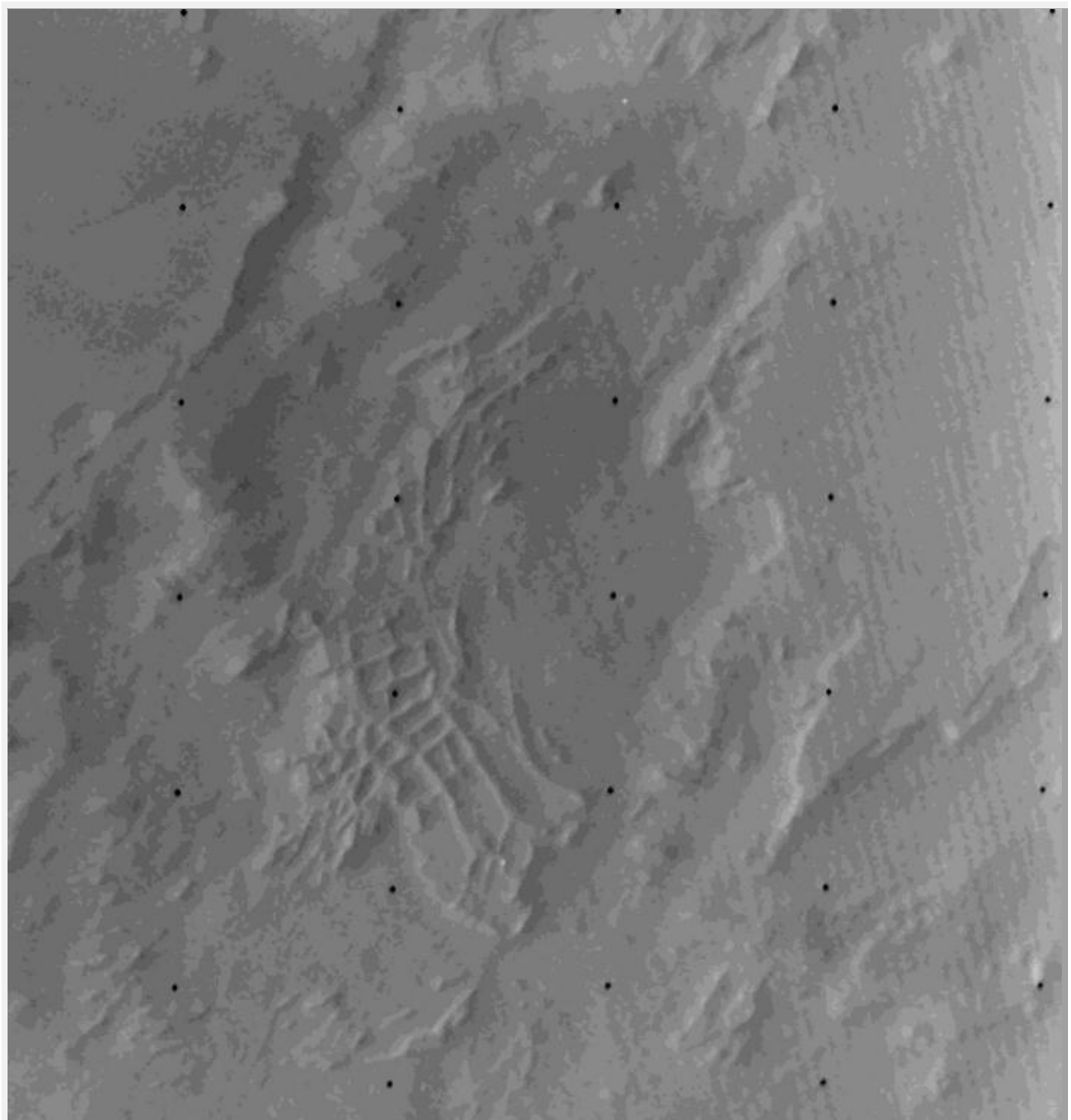
Mariner 9 image of the "Inca City". During the Mariner 9 mission, scientists found an unusual rectilinear structure associated with the south polar pitted terrain which they dubbed the "Inca City". Located near -80 degrees latitude and 64 degrees longitude, it is likely the result of wind deflation of deposits from underlying rough terrain. The "cells" in the image are about 4-5 kilometers in width.

Viking 2

"INCA CITY"



Viking 2
"INCA CITY"



Mars Orbiter Camera (MOC) High Resolution Images:

Rectilinear Ridges In South Polar Layered Terrain ("Inca City")

March 13, 1998

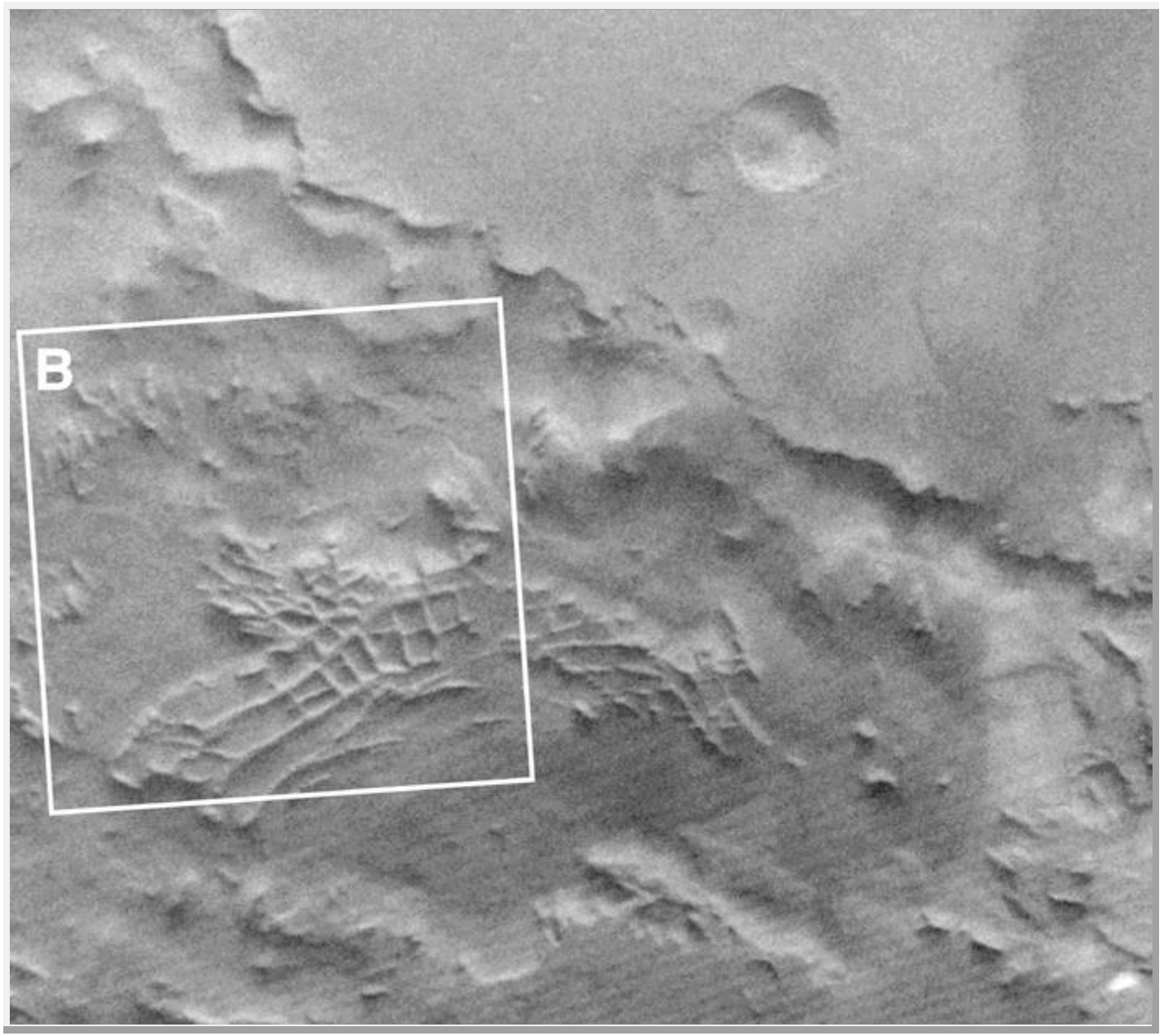


Image Credit: Malin Space Systems/NASA

(A) Portion of Viking Orbiter 2 image 421B64, reproduced here (click on icon) at full resolution of about 179 meters (585 feet) per picture element. The outlines of (B) is shown. North is up, sun illumination is from the top.

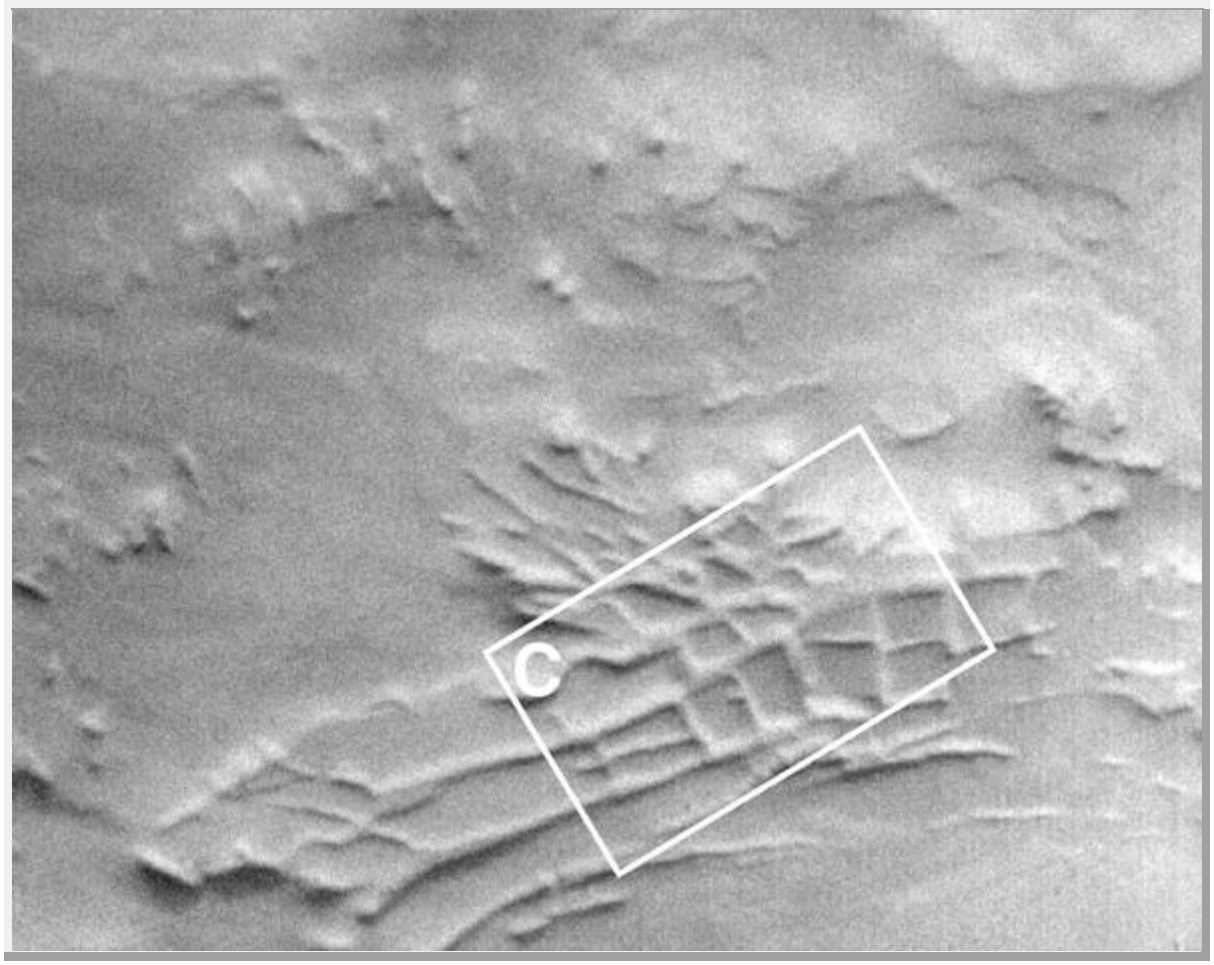


Image Credit: Malin Space Systems/NASA

(B) Highest-resolution pre-Mars Global Surveyor view. Image is a portion of Mariner 9 DAS #8044333. Click on the small view above to see the image at full spatial resolution of approximately 100 meters (327 feet) per pixel. White box indicates location of MOC image (C). North is approximately "up", sun illumination is from top/upper right.

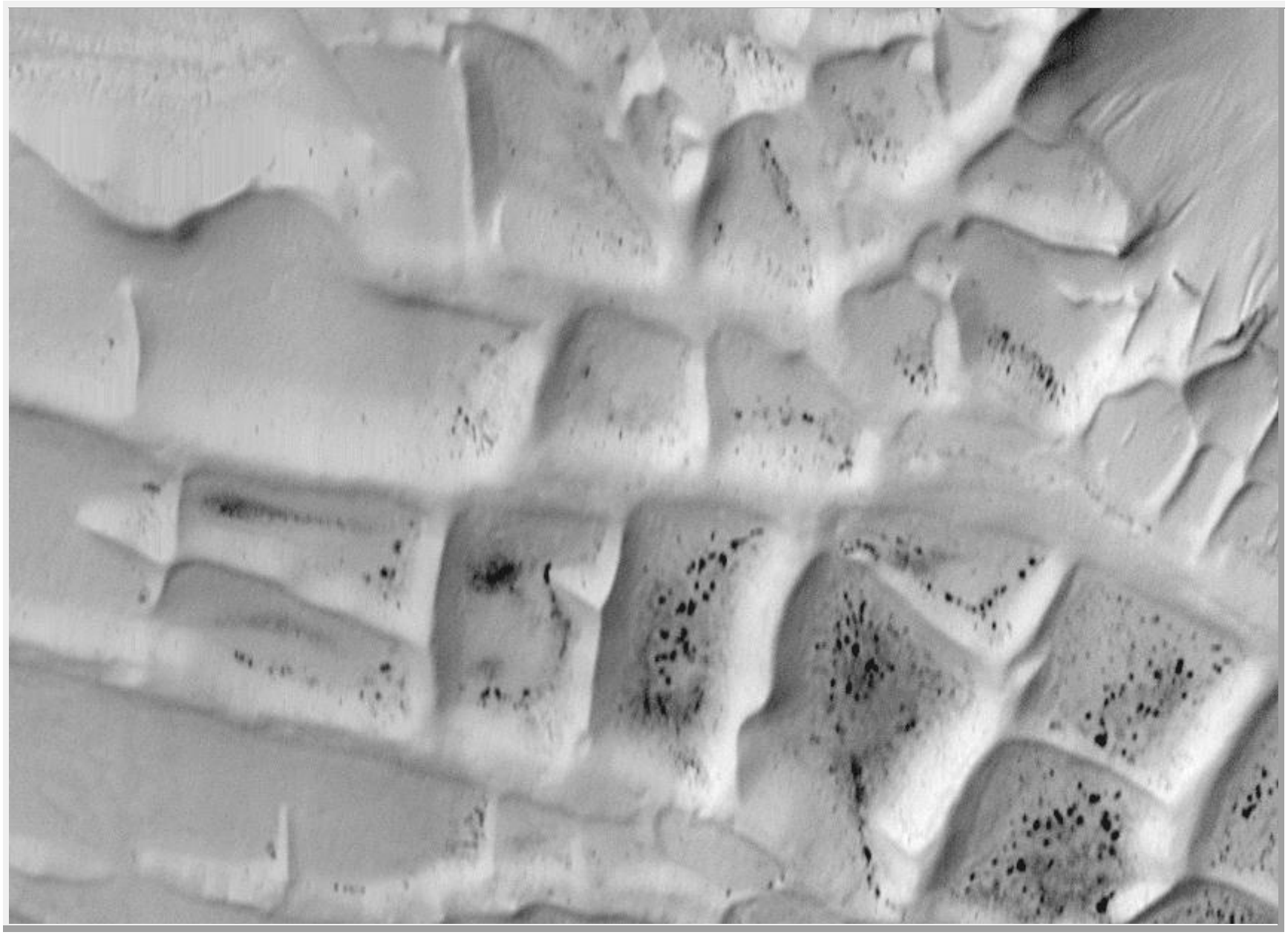


Image Credit: Malin Space Systems/NASA

(C) Subframe of MOC image 7908 reproduced at full resolution, about 23 meters/pixel (75 feet/pixel). Picture shows an area

approximately 20 x 14 km (12.4 x 8.7 miles) in size. Sun illumination is from upper left.

This set of rectilinear, intersecting ridges was first seen in images taken by Mariner 9 in 1972 (see context frame B). The superficial resemblance to ancient ruins led to their informal name, "Inca City". As 1997 turned to 1998, MOC obtained this stunning high-resolution view during the 79th orbit of Mars Global Surveyor. The subframe depicted here is centered on 81.54?S latitude, 64.28?W longitude.

Except for the small dark dots, everything in this image is covered by a moderately thin (probably less than a meter) layer of seasonal, CO2 frost.

CREDIT: Malin Space Systems/NASA Paper

Towards Lunar Archaeology

Dr. Alexey V. Arkhipov
Institute of Radio Astronomy, Nat. Acad. Sci. of Ukraine

Excerpt

Our Moon is a potential indicator of a possible alien presence near the Earth at some time during the past 4 billion years. To ascertain the presence of alien artifacts, a survey for ruinlike formations on the Moon has been carried out as a precursor to lunar archaeology.

Computer algorithms for semi-automatic, archaeological photo-reconnaissance are discussed. About 80,000 Clementine lunar orbital images have been processed, and a number of quasirectangular patterns found. Morphological analysis of these patterns leads to possible reconstructions of their evolution in terms of erosion. Two scenarios are considered: 1) the collapse of subsurface quasi-rectangular systems of caverns, and 2) the erosion of hills with quasi-rectangular lattices of lineaments. We also note the presence of embankment-like,
quadrangular, hollow hills with rectangular depressions nearby.. Tectonic (geologic) interpretations of these features are considered. The similarity of these patterns to terrestrial archaeological sites and proposed lunar base concepts suggest the need for further study and future in situ exploration.

"There are times when a scientist must not be afraid to make a fool of himself" - Arthur C. Clarke

Today, the idea of exploring the Moon for non-human artifacts is not a popular one among selenologists. Unfortunately, the detection of ET artifacts on the Moon is outside the interest of most selenologists due to their orientation towards natural formations and processes. It is also not of interest to mainstream archaeologists, as archaeology tends to adhere to a pre-Copernican geocentric point-of-view.

SOURCE: The Society for Planetary SETI Research (SPSR)

SOURCE: New Frontiers in Science, Vol. 1 No. 2, Winter 2002 PDF

SETI
On Lunar Archeology

In 1992, the Search for Alien Artifacts on the Moon (SAAM) — the first privately-organized archaeological reconnaissance of the Moon — was initiated. The justifications of lunar SETI, the wording of specific principles of lunar archaeology, and the search for promising areas on the Moon were the first stage of the project (1992-95). Preliminary results of lunar exploration6 show that the search for alien artifacts on the Moon is a promising SETI strategy, especially in the context of lunar colonization plans.

SOURCE: The Society for Planetary SETI Research (SPSR)

SOURCE: New Frontiers in Science, Vol. 1 No. 2, Winter 2002 PDF

Additional reading:

Arkhipov, A.V. “Earth-Moon System as a Collector of Alien Artefacts”, J. Brit. Interplanet. Soc., 1998, 51, 181-184.
Arkhipov, A.V., and Graham, F.G. “Lunar SETI: A Justification”, in The Search for Extraterrestrial Intelligence (SETI) in the Optical Spectrum II, ed. S.A. Kingsley ? G.A. Lemarchand, SPIE Proceedings, Vol.

2704, SPIE, Washington, 150-154, 1996.

Khorezmian Fortress Koy-Krylgan-Kala

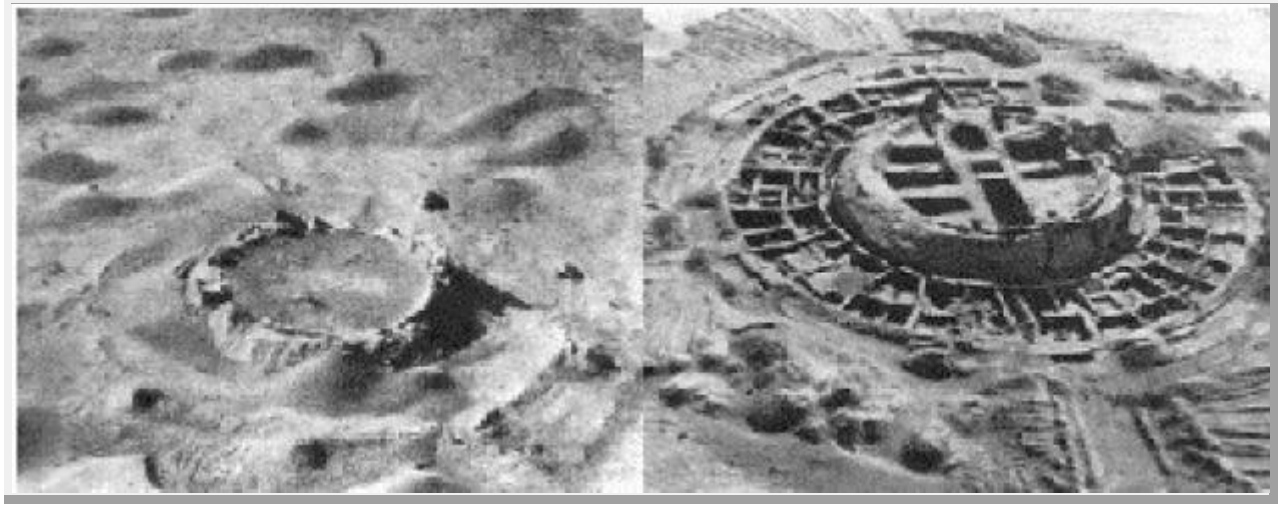


Fig. 1 The ancient Khorezmian fortress Koy-Krylgan-kala appeared as an impact crater on the air photo (left); its artificiality is obvious after the excavations in 1956 (right) [6].

The air view of the Ancient Assyrian ruins of Assur resemble the lunar lattice in Fig. 6.

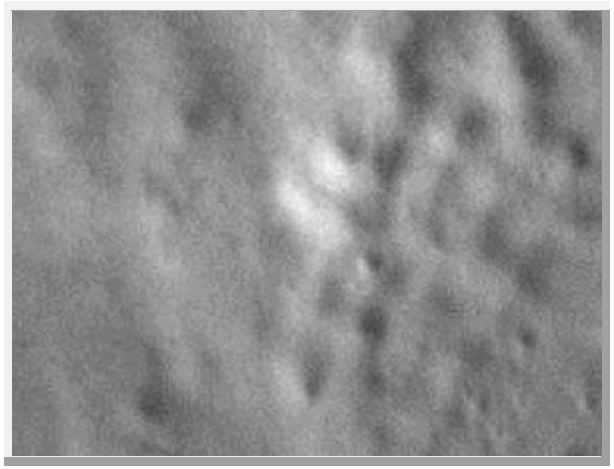


Fig. 5 The example of a wafer find (image LHD5472Q.287)

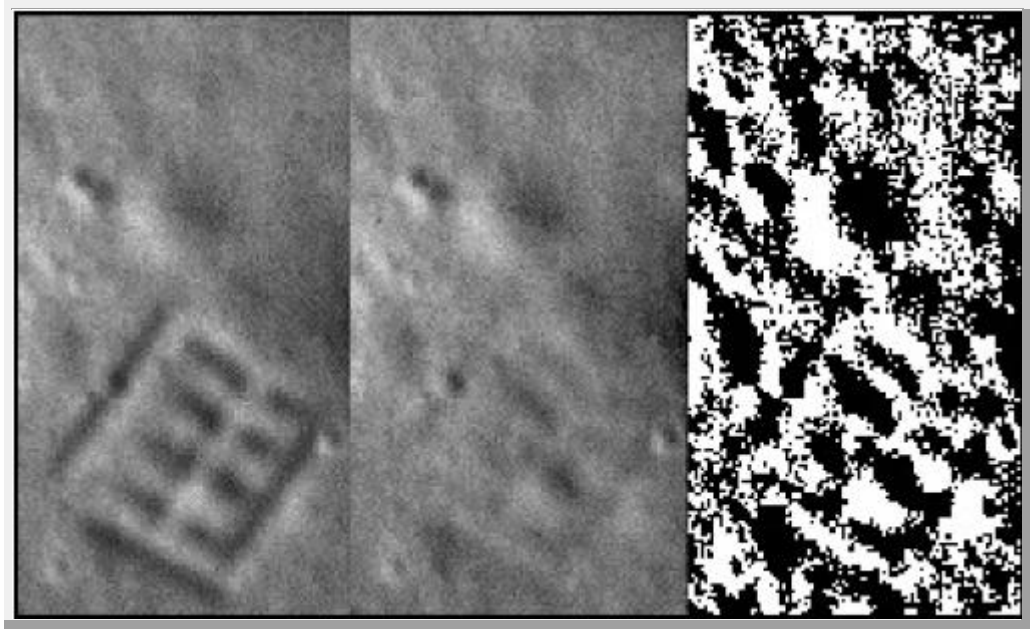


Fig. 2 Simulation of probable HIRES view of ancient settlement on the Moon (left). The erosion wipes off the surface tracks of construction (center), but the SAAM processing could reveal the rectangular anomaly (right).

Alexey V. Arkhipov is a researcher at the Institute of Radio Astronomy, National Academy of Sciences of the Ukraine, and an Assistant professor at National Kharkov University. He has a Ph.D. in astrophysics and radio astronomy (Main Astronomical Observatory at the National Academy of Sciences of the Ukraine, Kyiv, 1998). The title of his dissertation was "New approaches to the problem of search for extra-terrestrial intelligence." Dr. Arkhipov's research involves the study of decametric radio emissions of Jupiter and non-classical approaches to SETI (e.g. archaeological reconnaissance of the Moon). He is the author of Selenites (http://www.setileague.org/articles/selenite.htm) and more than 100 technical and scientific articles. Dr. Arkhipov is the SETI League's Volunteer Coordinator for the Ukraine. He is a member of the SETI Center (Moscow), the Society for Planetary SETI Research (SPSR), and the SETI section of the Council on Astronomy of the Russian Academy of Sciences. His curriculum vitae can be found at http://www.setileague.org/admin/alexey.htm.

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