

NOTES ON BASE

The base chart was prepared by ACIC with advisory assistance from Dr. Gerard P. Kuiper and his collaborators, D. W. Arthur and G. W. Whitman.

DATUM
The horizontal and vertical positions of features on this chart are based on selenocentric measurements... Technical Paper No. 15, "Coordinates of Lunar Features..."

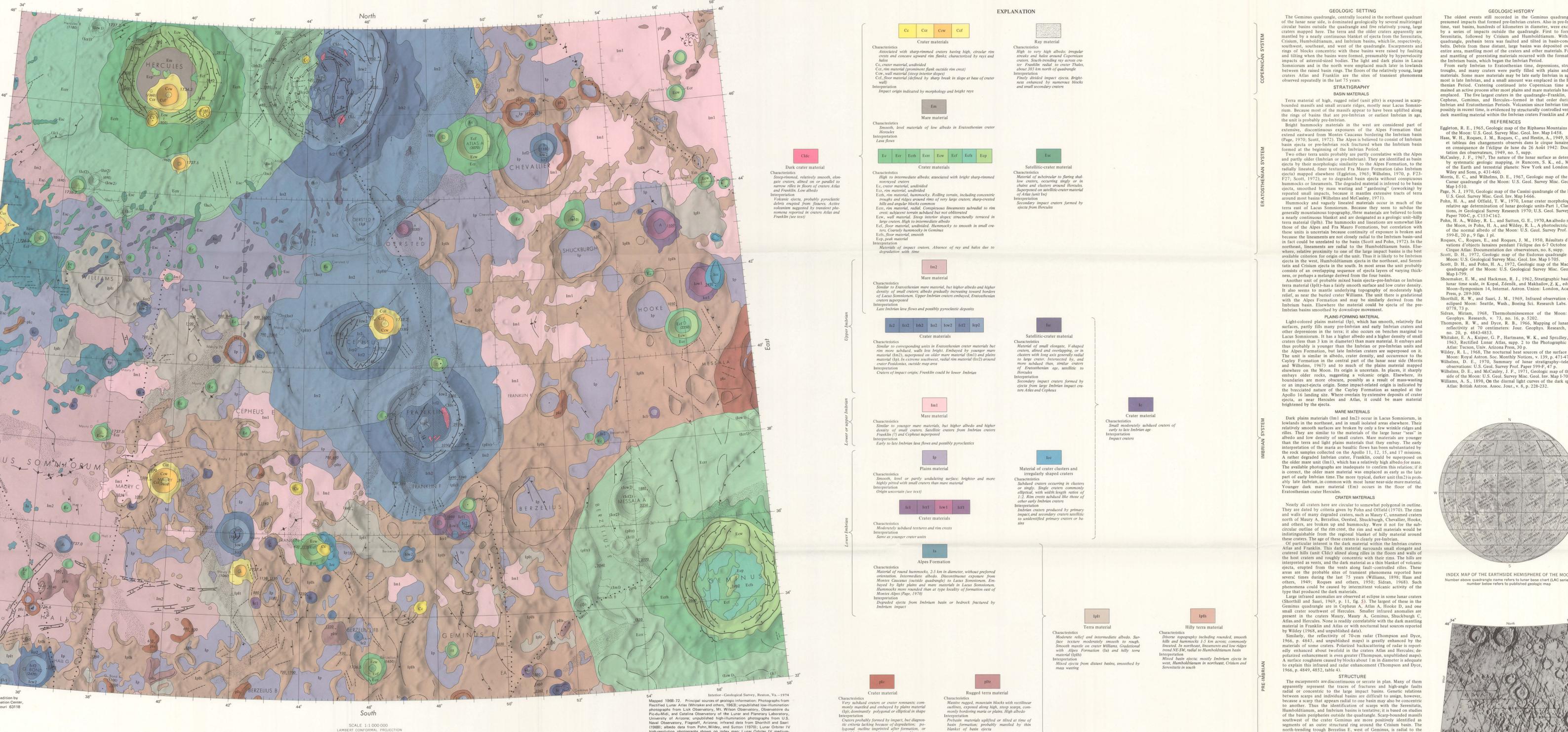
ELEVATIONS
Radius vector lengths are measured from the geometrical center of the moon to the plane of the crater rim... The relative elevations of crater rims and other features are measured in meters.

NAMES
Feature names were adopted from the 1935 International Astronomical Union nomenclature system... Names of the supplementary features are listed in the Appendix.

PORTRAYAL
The configuration of the lunar surface features shown on this chart is interpreted from photographic... Station University of Arizona, Lick, McDonald, Mount Wilson, Yerkes, Palomar and Kitt Peak Observatories.

EXPLANATION

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Crater materials: Cc, Ccr, Ccw, Ccf. Characteristics: High to very high albedo, irregular streaks and halos around Copernican craters...
Mare material: Em. Characteristics: Smooth, level materials of low albedo in Eratosthenian crater...
Crater materials: Ec, Ec2, Ec3, Ec4, Ec5, Ec6, Ec7, Ec8, Ec9, Ec10. Characteristics: High to intermediate albedo, associated with bright sharp-stemmed craters...
Satellite-crater material: Es. Characteristics: Material of subcircular to flaring shallow craters...
Mare material: Im1, Im2. Characteristics: Similar to Eratosthenian mare material, but higher albedo and higher density of small craters...
Crater materials: Icl, Icl2, Icl3, Icl4, Icl5, Icl6, Icl7, Icl8, Icl9, Icl10. Characteristics: Similar to corresponding units in Eratosthenian crater materials...
Satellite-crater material: Es. Characteristics: Material of small elongate, V-shaped craters...
Mare material: Im1, Im2. Characteristics: Similar to Eratosthenian mare material, but higher albedo and higher density of small craters...
Plains material: Ip. Characteristics: Smooth, level or partly undulating surface; brighter and more highly pitted with small craters than mare material...
Crater materials: Icl, Icl2, Icl3, Icl4, Icl5, Icl6, Icl7, Icl8, Icl9, Icl10. Characteristics: Moderately subradial textures and rim crests...
Alpes Formation: Ia. Characteristics: Material of round hummocks, 2.5 km in diameter, without preferred orientation...
Terra material: Tpt. Characteristics: Moderate relief and intermediate albedo. Surface texture moderately smooth to rough...
Hilly terra material: Iph. Characteristics: Diverse topography including rounded, smooth hills and hummocks 1.5 km across...
Crater material: Ipc. Characteristics: Very subradial craters or crater remnants...
Rugged terra material: Ipr. Characteristics: Massive rugged, mountain blocks with well-defined ridges...
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Rugged terra material: Ipr. Characteristics: Massive rugged, mountain blocks with well-defined ridges...



Lunar base chart LAC 27, 1st edition by the Lunar Information Center, U.S. Air Force, St. Louis, Missouri 63118

Scale 1:1 000 000
Lambert Conformal Projection
Standard Parallels 27°00' and 42°00'

STATUTE MILES
KILOMETERS

Prepared on behalf of NASA under contract nos. R-66 and W-13, 130

GEOLOGIC MAP OF THE GEMINUS QUADRANGLE OF THE MOON

By
Maurice J. Grolrier
1974

GEOLOGIC SETTING

The Geminus quadrangle, centrally located in the northeast quadrant of the lunar near side, is dominated geologically by several multiringed craters... The terrae and the older craters apparently are mantled by a nearly continuous blanket of Copernican material.

STRATIGRAPHY

Two other terrae units probably are partly correlative with the Alpes and partly older (Imbrinium or pre-Imbrinium). They are identified as basin ejecta by their morphologic similarity to the Alpes Formation... Bright hummocky materials in the west are considered part of extensive, discontinuous exposures of the Alpes Formation...

PLAINS-FORMING MATERIAL

Light-colored plains material (Ip), which has smooth, relatively flat surfaces, partly fills many pre-Imbrinium and early Imbrinium craters and other depressions in the terrae... It also occurs on benches marginal to Lacus Somniorum.

MARE MATERIAL

Dark plains materials (Im1 and Im2) occur in Lacus Somniorum, in lowlands in the northeast, and in small isolated areas elsewhere. Their relatively smooth surfaces are broken by only a few wrinkle ridges and rilles. They are similar to the materials in the large lunar "seas" in albedo and low density of small craters.

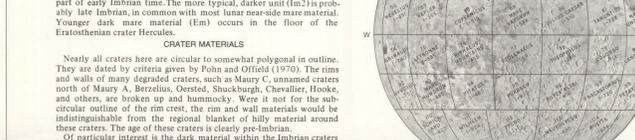
CRATER MATERIALS

Nearly all craters here are circular to somewhat polygonal in outline. They are dated by criteria given by Pohn and Offield (1970). The rims and walls of many degraded craters, such as Maury C, unnamed craters north of Maury A, Berzelius, Desland, Shuckburgh, Chevallier, Hooke, and others, are broken up and hummocky. Were it not for the sub-circular outline of the rim crest, the rim and wall materials would be indistinguishable from the regional blanket of hilly material around these craters.

STRUCTURE

The encampments are discontinuous or serrate in plan. Many of them apparently represent the traces of fractures and high-angle faults radial or concentric to the large impact basins. Genetic relations between scars and individual basins are difficult to assign, however, because a scar that appears radial to one basin may also be concentric to another.

INDEX MAP OF THE EARTH'SIDE HEMISPHERE OF THE MOON



Number above quadrangle name refers to lunar base chart (LAC Series); number below refers to published geologic map

LUNAR ORBITER PHOTOGRAPHIC COVERAGE OF GEMINUS QUADRANGLE
All numbers refer to high-resolution frames of Orbiter IV. Frames 74, 75, and 86, illumination resolution approximately 100 m; frames 62 and 67, 200-300 m; frame 89, very degraded; frames 171, 191, and 192 taken obliquely at low sun illumination, resolution 150-300 m.

NOTE: Albedo is defined as the reflectivity at full Moon. Qualitative albedo terms used on this map correspond approximately as follows to quantitative values compiled by Pohn, Wilkey, and Sutton (1970): very high (very bright) albedo, 0.16; high, 0.13-0.16; intermediate, 0.10-0.13; low albedo, 0.08-0.10. The stratigraphic system used on this map follows that established by Shoemaker and Hackman (1962) and revised by McCauley (1967) and Wilhelms (1970).

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