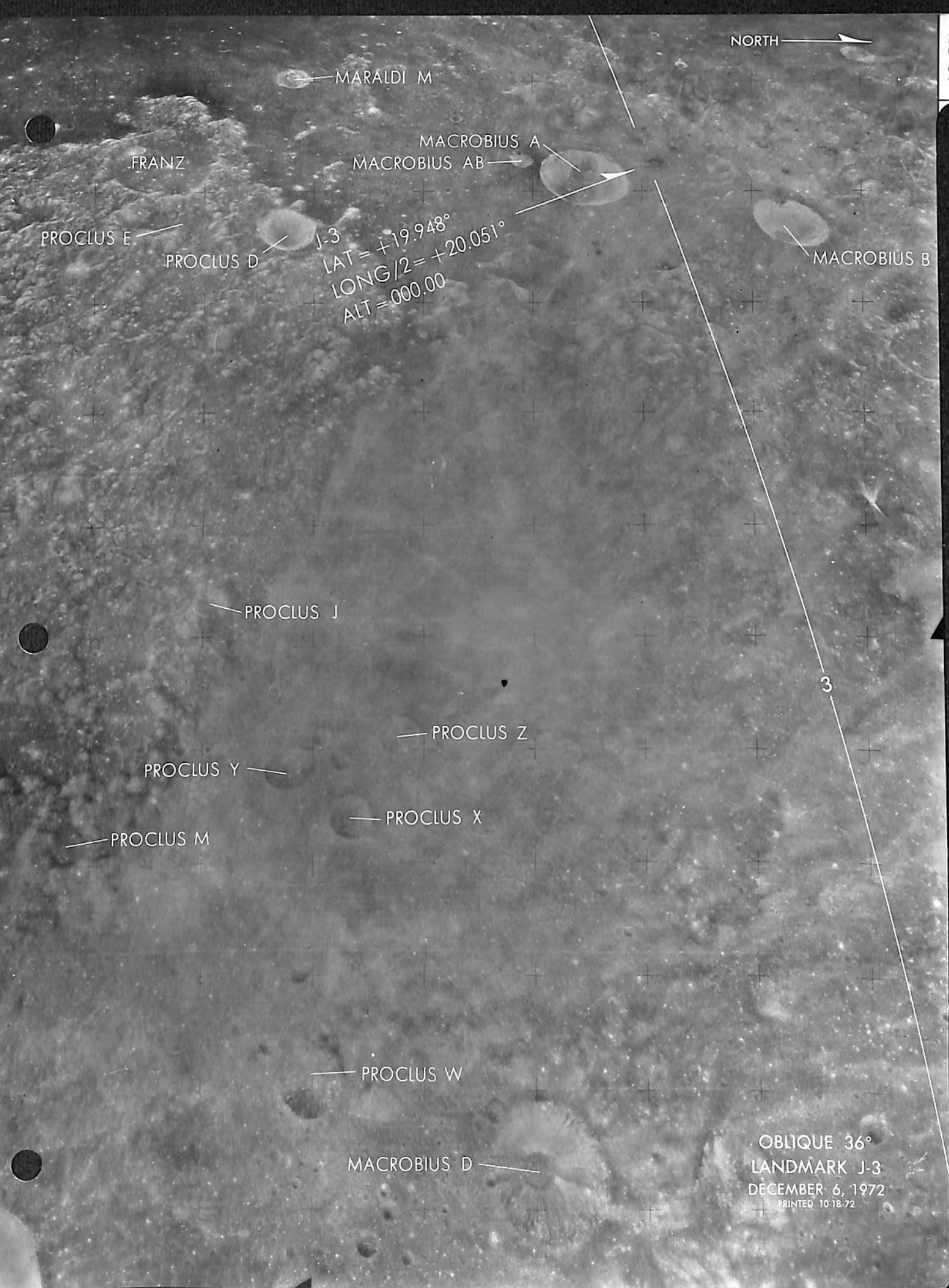
APOLLO 17	
CSM LUNAR LANDMARK MAPS	
PART NO.	S/N
SKB32100123-322	1002

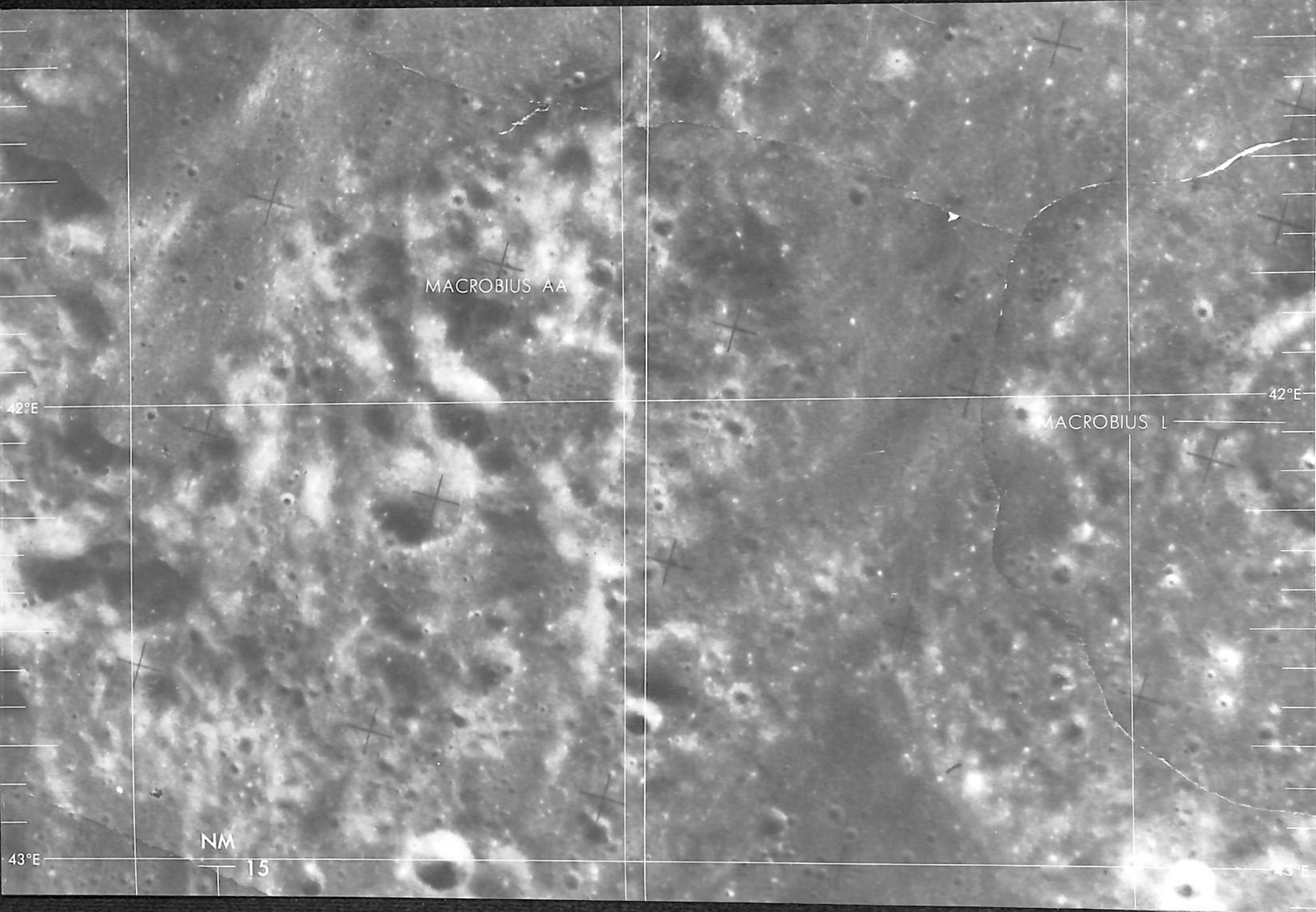
INDEX SHEET

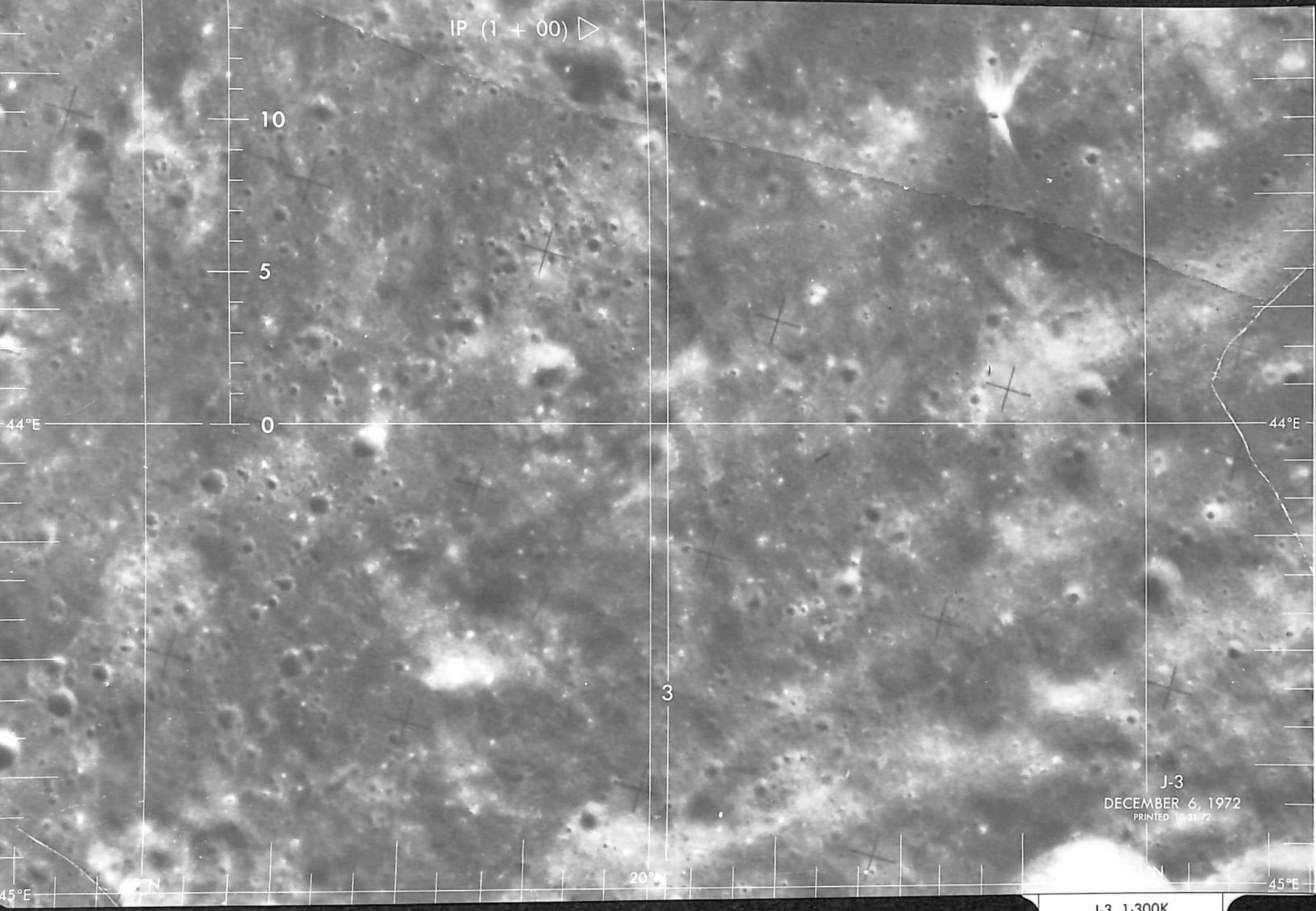
TYPE	NUMBER	LATITUDE	LONGITUDE	DIAMETER (ft)	SCALE	TAB
Training Landmark	J-3	+19.948°	+40.102°	1430	36° Oblique 1:300K	J-3 OBL J-3 1:300K
Landing Site Landmarks	17-1,2,3	See Data Sheet			29° Oblique 46° Oblique 1:300K	17-1-3 OBL 17-1,2,3 1:300K
Selenodetic Reference Point	RP-3	-03.694°	+131.912°	15565	1:25M 1:630K	RP-3
Landing Site Landmark	17-1	+20.160°	+30.809°	1575	1:630K	17-1 1:630K
Landing Site	———	+20.164°	+30.750°	———	1:50K 1:25K	SITE
Selenodetic Reference Point	F-1	+01.863°	+88.250°	7985	1:2.5M Oblique	F-1

Printed
10-6-72


NORTH
MARALDI M
MACROBIUS A
MACROBIUS AB
FRANZ
PROCLUS E
PROCLUS D
J-3
LAT = +19.948°
LONG/2 = +20.051°
ALT = 000.00
MACROBIUS B
PROCLUS J
3
PROCLUS Z
PROCLUS Y
PROCLUS X
PROCLUS M
PROCLUS W
MACROBIUS D
OBLIQUE 36°
LANDMARK J-3
DECEMBER 6, 1972
PRINTED 10-18-72
J-3 OBL


39°E
19°N
20°N
21°N
NORTH
SCALE
1:300,000 (APPROX)
3
MACROBIUS BA
J-3
LAT = +19.948°
LONG/2 = +20.051°
ALT = 000.00
40°E
40°E
MACROBIUS A
MACROBIUS B
41°E
41°E


MACROBIUS AA
MACROBIUS L
42°E
42°E
43°E
NM
15


IP (1 + 00)
10
5
0
3
44°E
44°E
45°E
45°E
J-3
DECEMBER 6, 1972
PRINTED 10 31 72
J-3 1:300K

DATA SHEET

TARGET POINT DATA

LATITUDE (deg)	LONG/2 (deg)	LONGITUDE (deg)	ALTITUDE (n.mi.)
+20.164	+15.375	+30.750	-001.95

LANDMARK DATA

LANDMARK NUMBER	LATITUDE (deg)	LONG/2 (deg)	LONGITUDE (deg)	ALTITUDE (n.mi.)	NOMINAL DISTANCE FROM GROUND TRACK (n.mi.)	LANDMARK DIAMETER (ft)
17-1	+20.160	+15.405	+30.809	-001.96	0.00	1575
17-2*	+20.020	+15.402	+30.804	-001.97	2.24S	968
17-3*	+20.272	+15.350	+30.700	-001.89	1.90N	1168

*Rev 12 alternates for perigee <10 n.mi.

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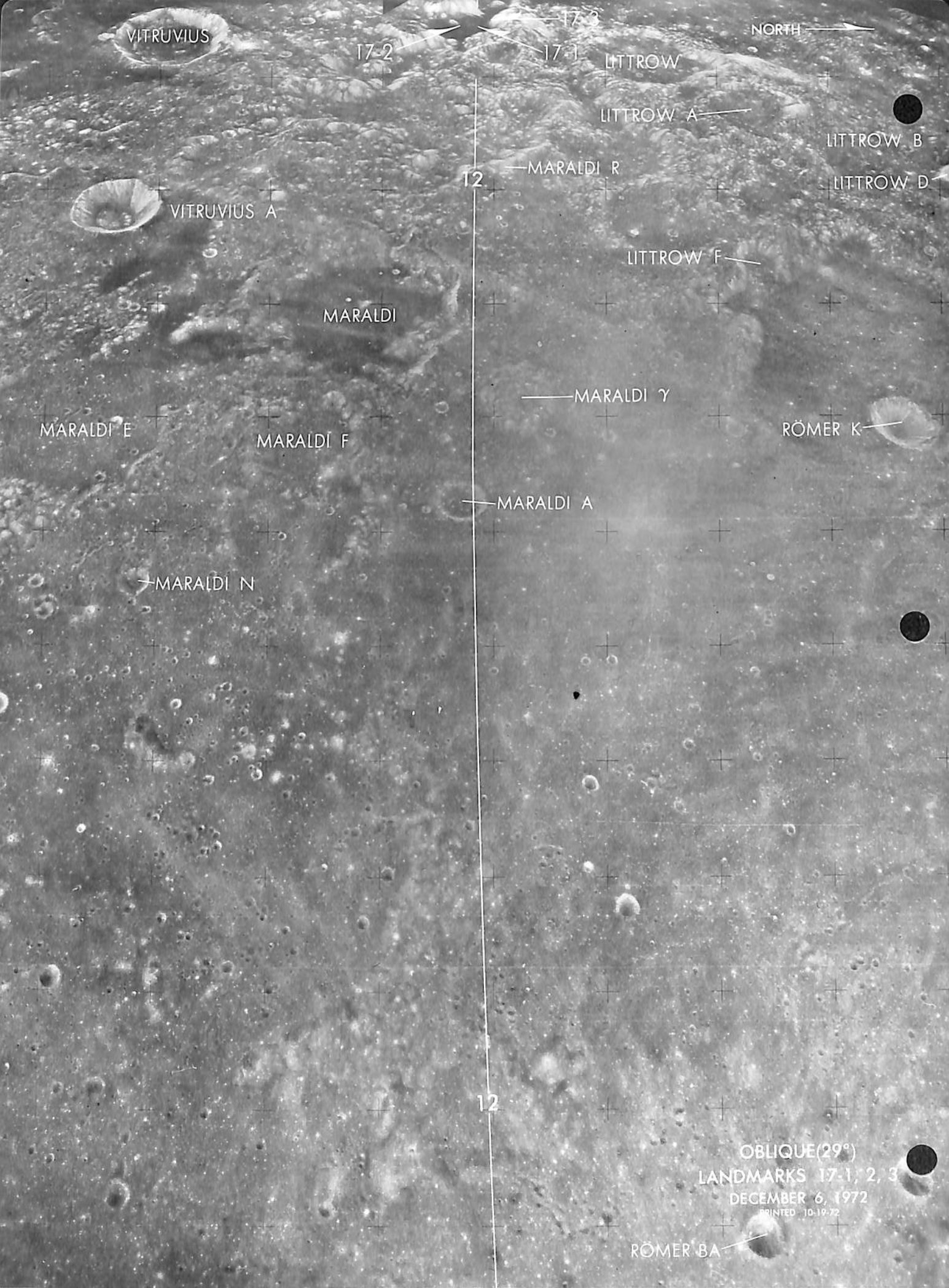
10-6-72


NORTH
LITTROW BB
VITRUVIUS E
MOUNT ARGAEUS
12
LITTROW BA
LITTROW B
LITTROW BD
17-3
17-2
17-1
LITTROW BC
VITRUVIUS
LITTROW
17-1-3 OBL
LITTROW A
MARALDI R
LITTROW F
MARALDI
12
OBLIQUE(46°)
LANDMARKS 17-1, 2, 3
DECEMBER 6, 1972
PRINTED 10-19-72


VITRUVIUS
17-2
17-3
17-1
NORTH
LITTROW
LITTROW A
LITTROW B
MARALDI R
12
LITTROW D
VITRUVIUS A
LITTROW F
MARALDI
MARALDI γ
MARALDI E
MARALDI F
RÖMER K
MARALDI A
MARALDI N
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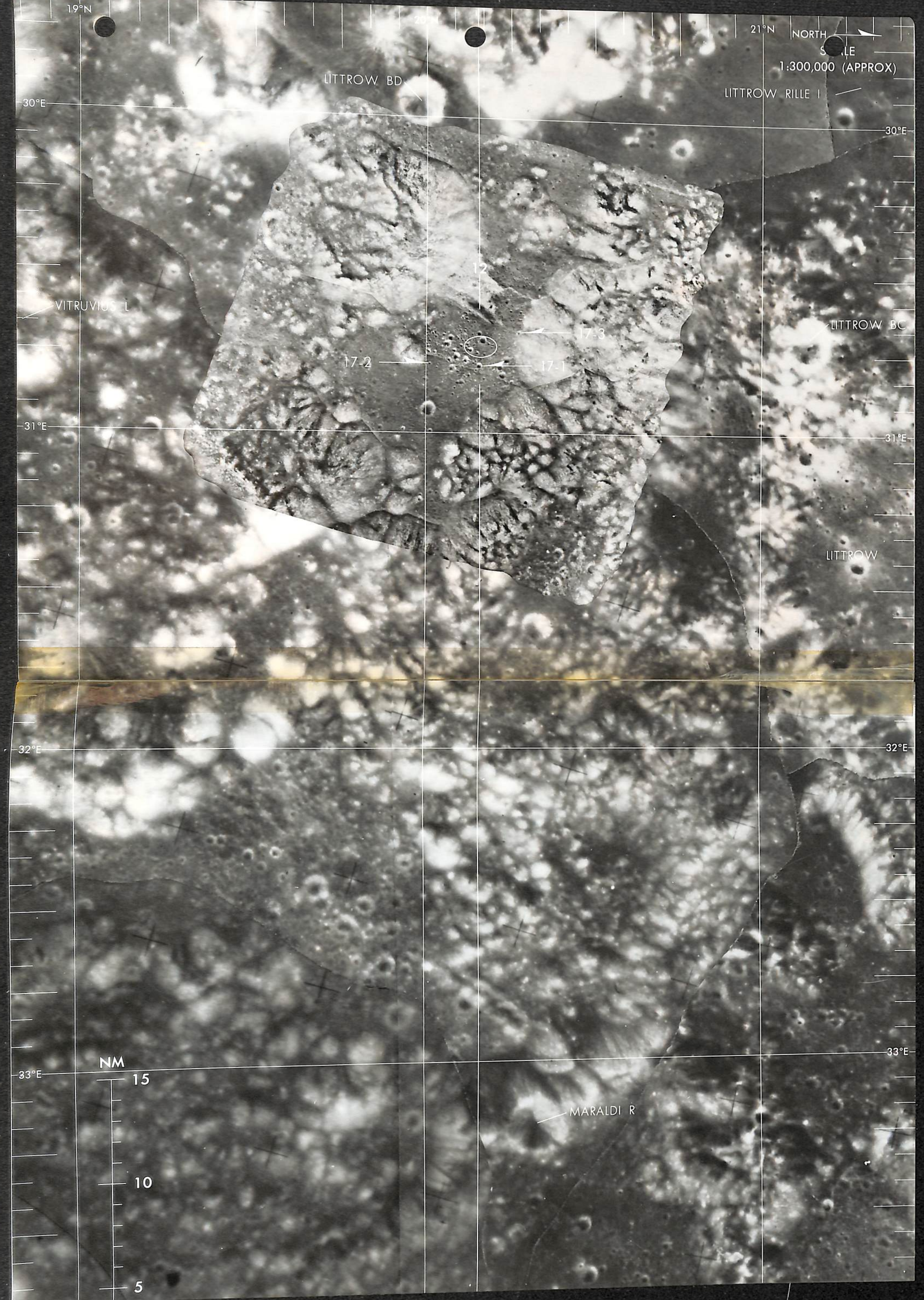
LANDMARKS 17-1, 2, 3
DECEMBER 6, 1972
PRINTED 10-19-72
RÖMER BA


19°N
20°N
21°N
NORTH
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LITTROW BD
LITTROW RILLE I
30°E
30°E
12
VITRUVIUS L
17-3
LITTROW BC
17-2
17-1
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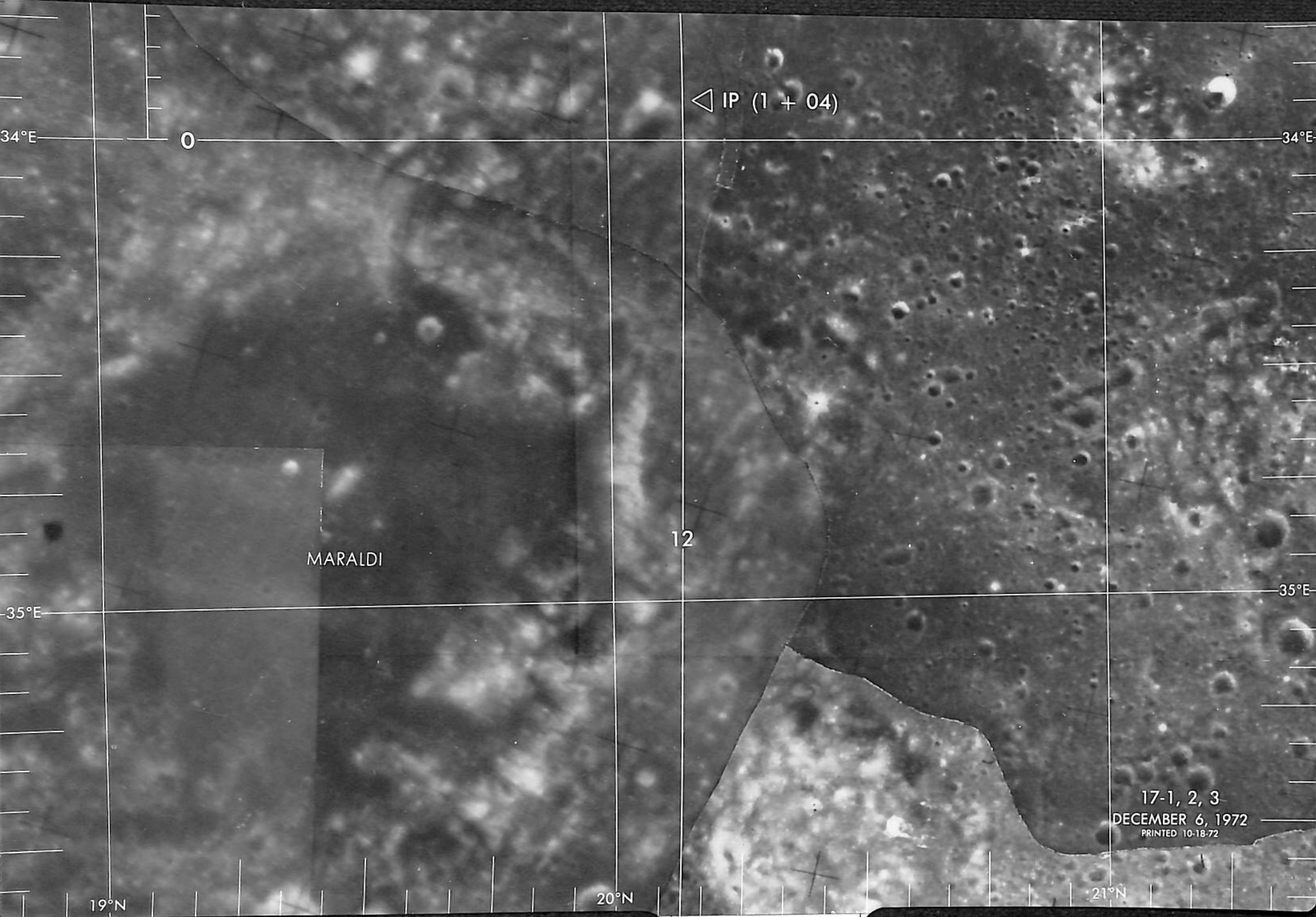
31°E
LITTROW
32°E
32°E
33°E
NM
33°E
15
10
5
MARALDI R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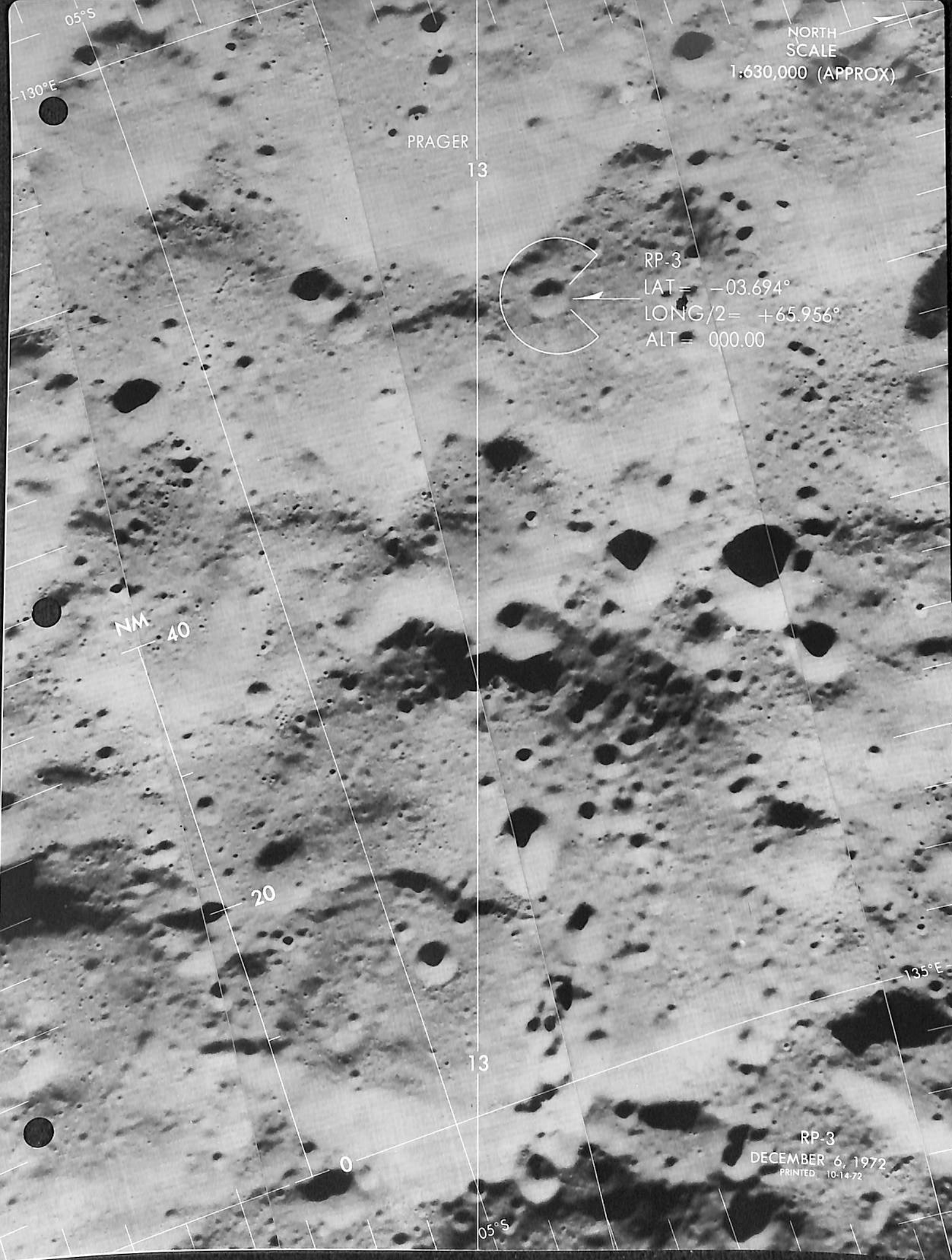
34°E
0
34°E
12
MARALDI
35°E
35°E
17-1, 2, 3
DECEMBER 6, 1972
PRINTED 10-18-72
19°N
20°N
21°N

17-1, 2, 3 1:300K


05°S
130°E
NORTH
SCALE
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13
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ALT = 000.00
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135°E
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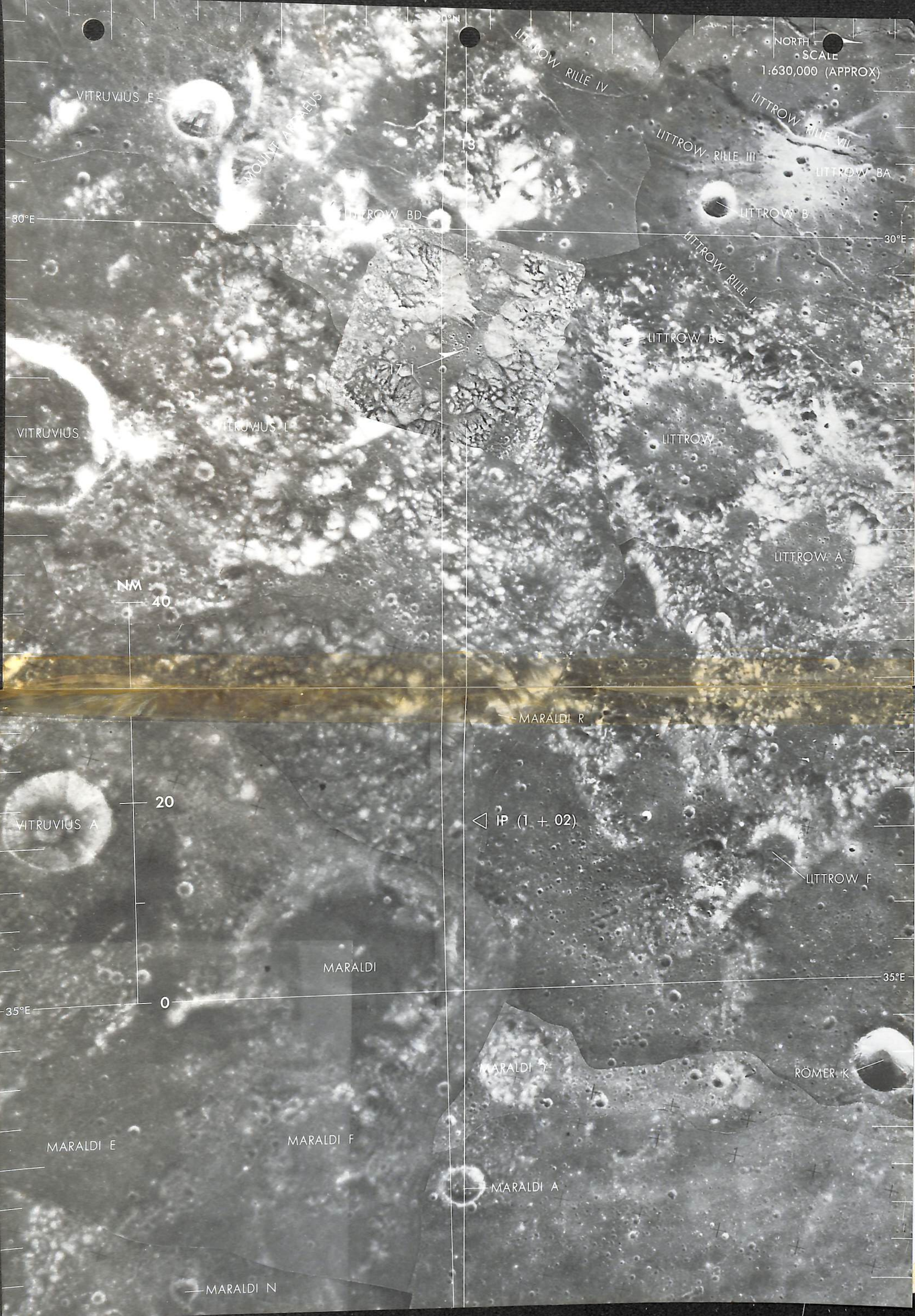
05°S
RP-3
DECEMBER 6, 1972
PRINTED 10-14-72

RP-3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NORTH
SCALE
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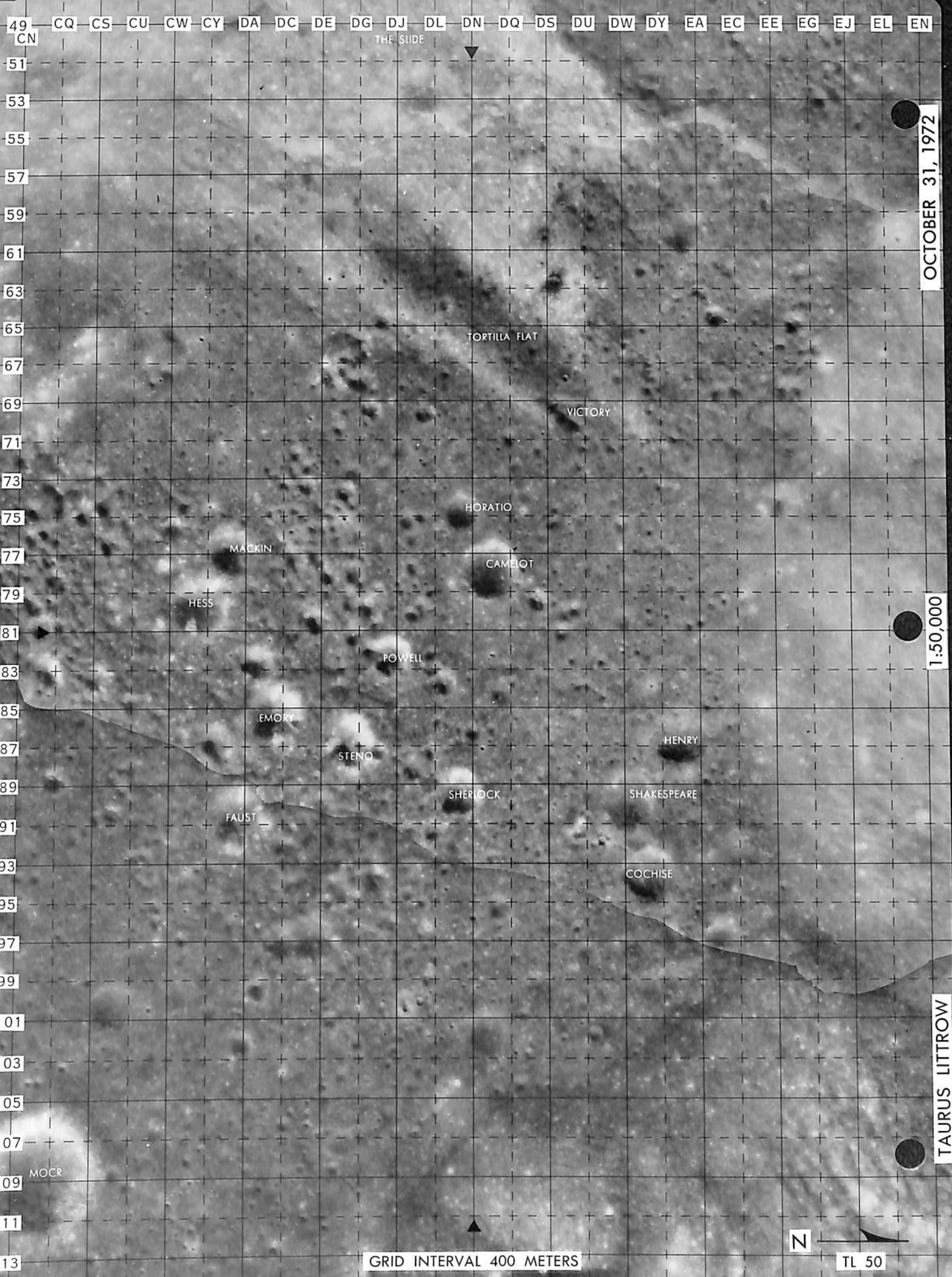
VITRUVIUS E
MOUNT ARGAEUS
LITTROW RILLE IV
LITTROW RILLE VII
LITTROW RILLE III
LITTROW BA
LITTROW B
LITTROW BD
30°E
LITTROW RILLE I
LITTROW BC
17
VITRUVIUS
VITRUVIUS L
LITTROW
LITTROW A
NM
40
MARALDI R
20
VITRUVIUS A
IP (1 + 02)
LITTROW F
MARALDI
0
35°E
MARALDI Y
RÖMER K
MARALDI E
MARALDI F
MARALDI A
MARALDI N


RÖMER J
MARALDI M
MACROBIUS BA
40°E
40°E
MACROBIUS AB
MACROBIUS A
13
MACROBIUS K
MACROBIUS B
17-1
DECEMBER 6, 1972
PRINTED 10-31-72
20°N
17-1 1:630K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THE SLIDE
TORTILLA FLAT
VICTORY
HORATIO
MACKIN
CAMELOT
HESS
POWELL
EMORY
STENO
HENRY
SHERLOCK
SHAKESPEARE
FAUST
COCHISE
MOCR
OCTOBER 31, 1972
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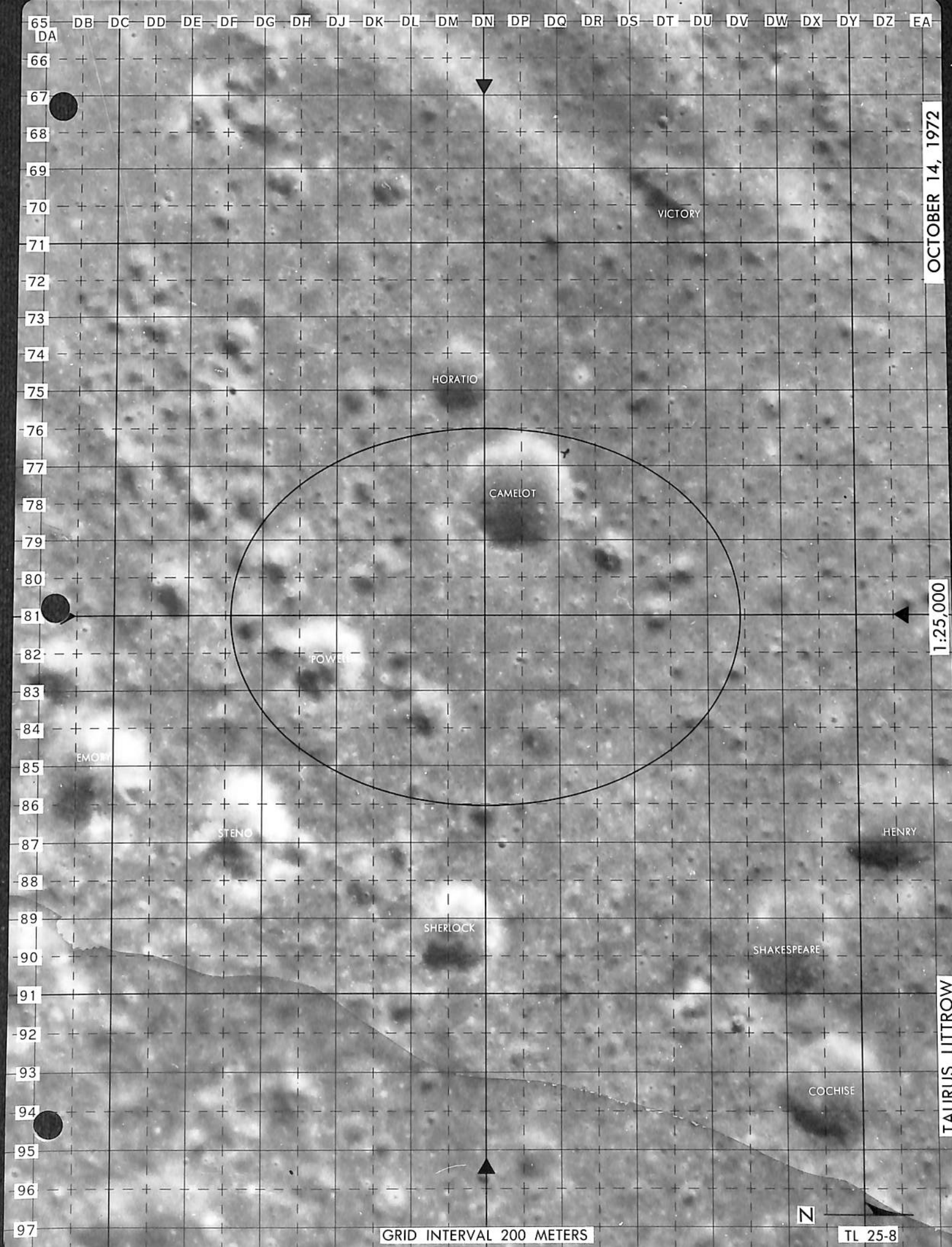
TAURUS LITTROW
N
GRID INTERVAL 400 METERS
TL 50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94
95
96
97
VICTORY
HORATIO
CAMELOT
POWELL
EMORY
STENO
HENRY
SHERLOCK
SHAKESPEARE
COCHISE
OCTOBER 14, 1972
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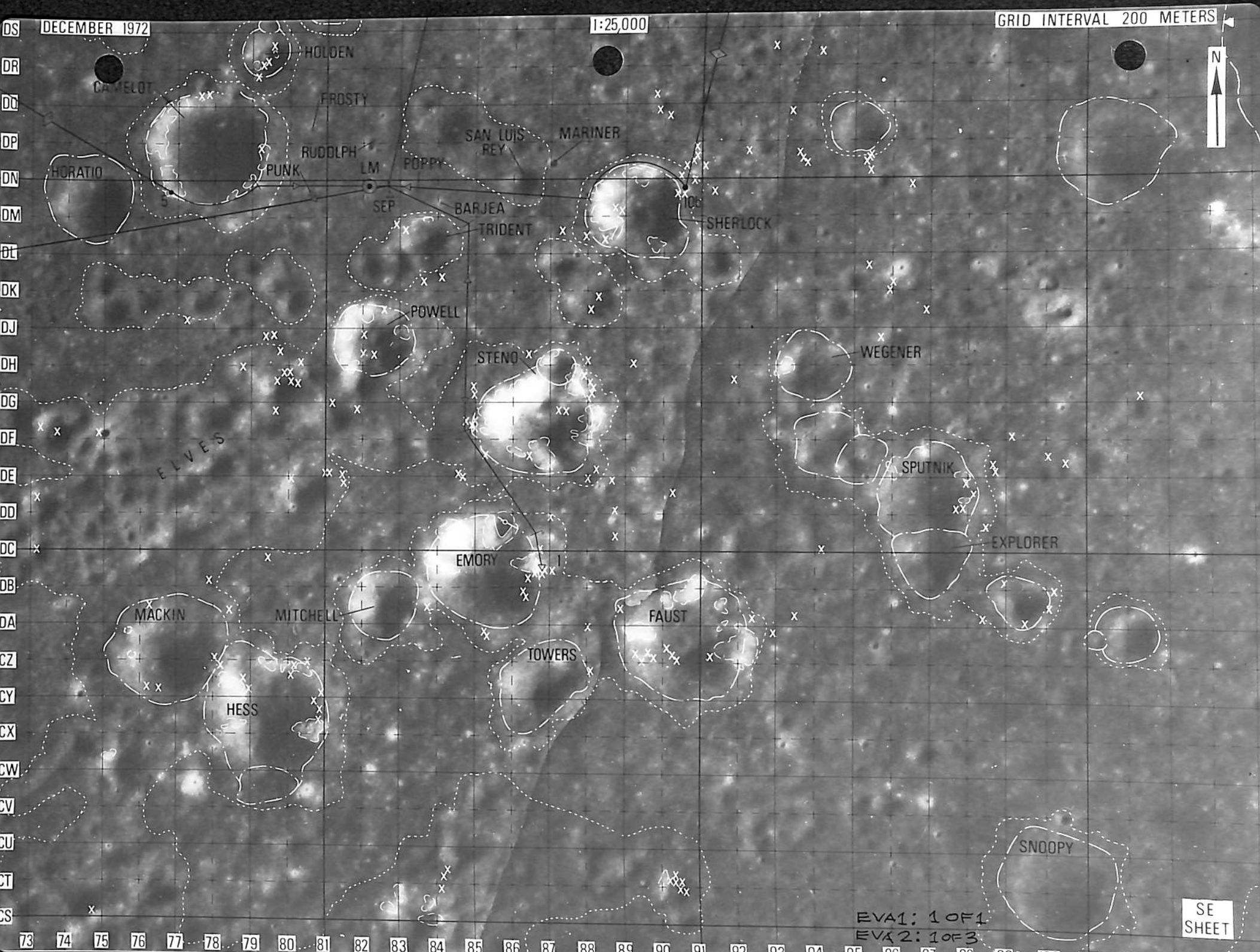
SITE
TAURUS LITTROW
N
GRID INTERVAL 200 METERS
TL 25-8


DECEMBER 1972
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GRID INTERVAL 200 METERS
N
HOLDEN
CAMELOT
FROSTY
SAN LUIS REY
MARINER
RUDOLPH
HORATIO
PUNK
LM
POPPY
SEP
BARJEA
TRIDENT
SHERLOCK
POWELL
STENO
WEGENER
ELVES
SPUTNIK
EXPLORER
EMORY
MACKIN
MITCHELL
FAUST
TOWERS
HESS
SNOOPY
SE SHEET
EVA 1: 1 OF 1
EVA 2: 1 OF 3
DS
DR
DQ
DP
DN
DM
DL
DK
DJ
DH
DG
DF
DE
DD
DC
DB
DA
CZ
CY
CX
CW
CV
CU
CT
CS
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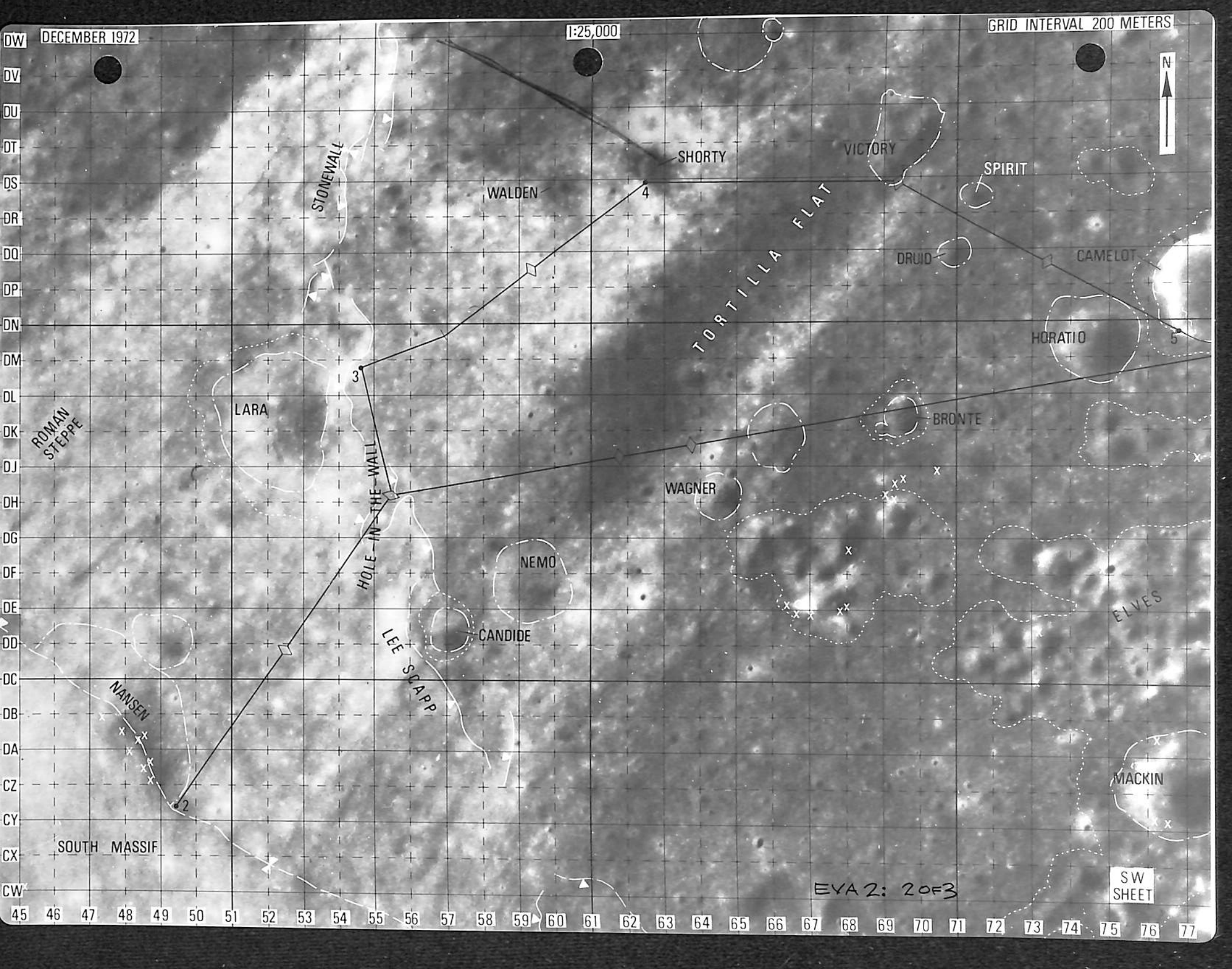
DECEMBER 1972
1:25,000
GRID INTERVAL 200 METERS
N
SHORTY
VICTORY
SPIRIT
WALDEN
STONEWALL
TORTILLA FLAT
DRUID
CAMELOT
HORATIO
BRONTE
LARA
ROMAN STEPPE
HOLE-IN-THE-WALL
WAGNER
NEMO
CANDIDE
LEE SCARP
ELVES
NANSEN
MACKIN
SOUTH MASSIF
1
2
3
4
5
EVA 2: 2 OF 3
SW SHEET
DW DV DU DT DS DR DQ DP DN DM DL DK DJ DH DG DF DE DD DC DB DA CZ CY CX CW
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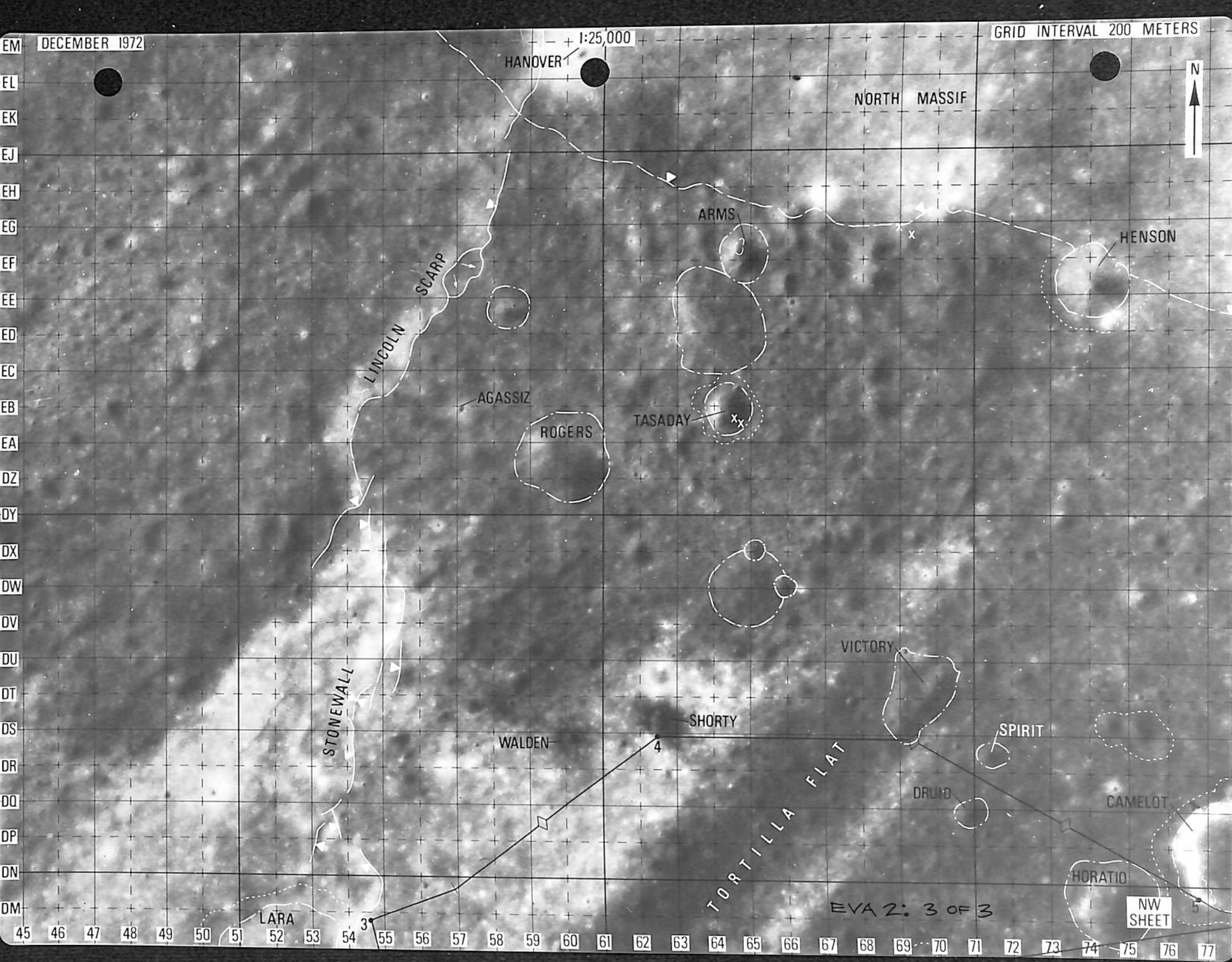
DECEMBER 1972
1:25,000
GRID INTERVAL 200 METERS
HANOVER
NORTH MASSIF
N
ARMS
HENSON
LINCOLN SCARP
AGASSIZ
ROGERS
TASADAY
VICTORY
SHORTY
SPIRIT
WALDEN
STONEWALL
TORTILLA FLAT
DRUID
CAMELOT
HORATIO
LARA
NW SHEET
EVA 2: 3 OF 3
3
4
5
EM
EL
EK
EJ
EH
EG
EF
EE
ED
EC
EB
EA
DZ
DY
DX
DW
DV
DU
DT
DS
DR
DQ
DP
DN
DM
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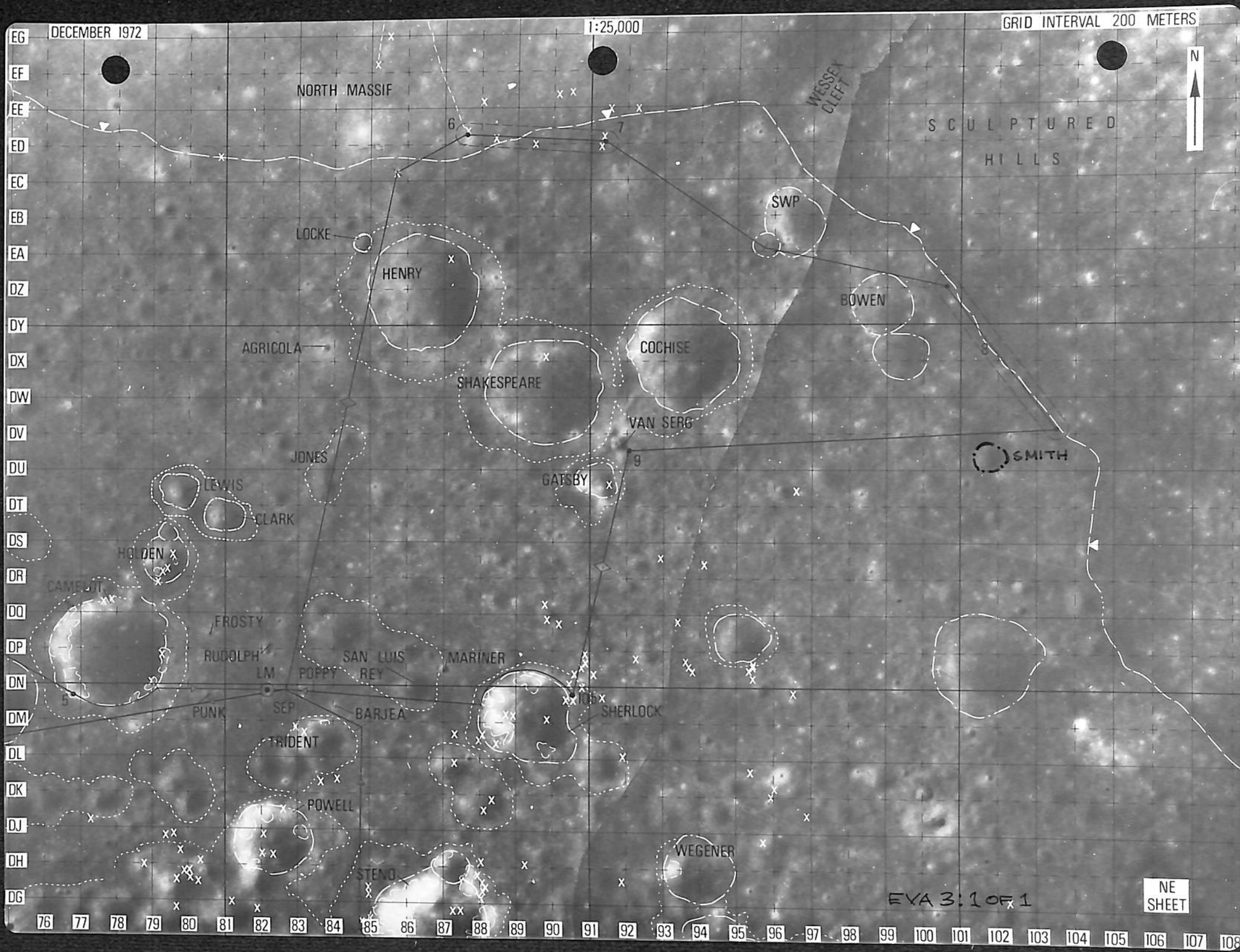
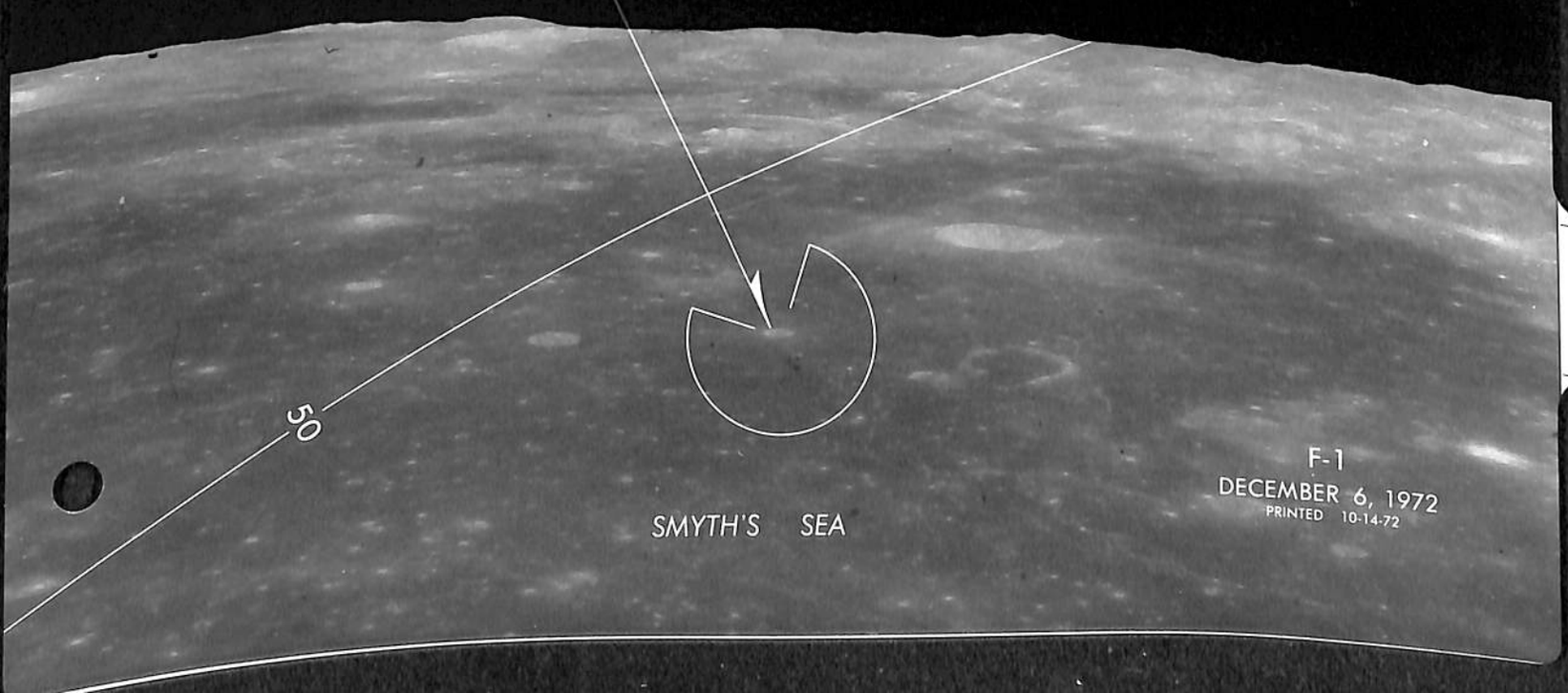

DECEMBER 1972
1:25,000
GRID INTERVAL 200 METERS
N
NORTH MASSIF
WESSEL CLEFT
SCULPTURED HILLS
SWP
LOCKE
HENRY
BOWEN
AGRICOLA
COCHISE
SHAKESPEARE
VAN SERG
SMITH
JONES
GATSBY
LEWIS
CLARK
HOLDEN
CAMELOT
FROSTY
RUDOLPH
LM
POPPY
SAN LUIS REY
MARINER
PUNK
SEP
BARJEA
SHERLOCK
TRIDENT
POWELL
WEGENER
STENO
EVA 3:1 OF 1
NE SHEET
EG EF EE ED EC EB EA DZ DY DX DW DV DU DT DS DR DQ DP DN DM DL DK DJ DH DG
76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108

NORTH

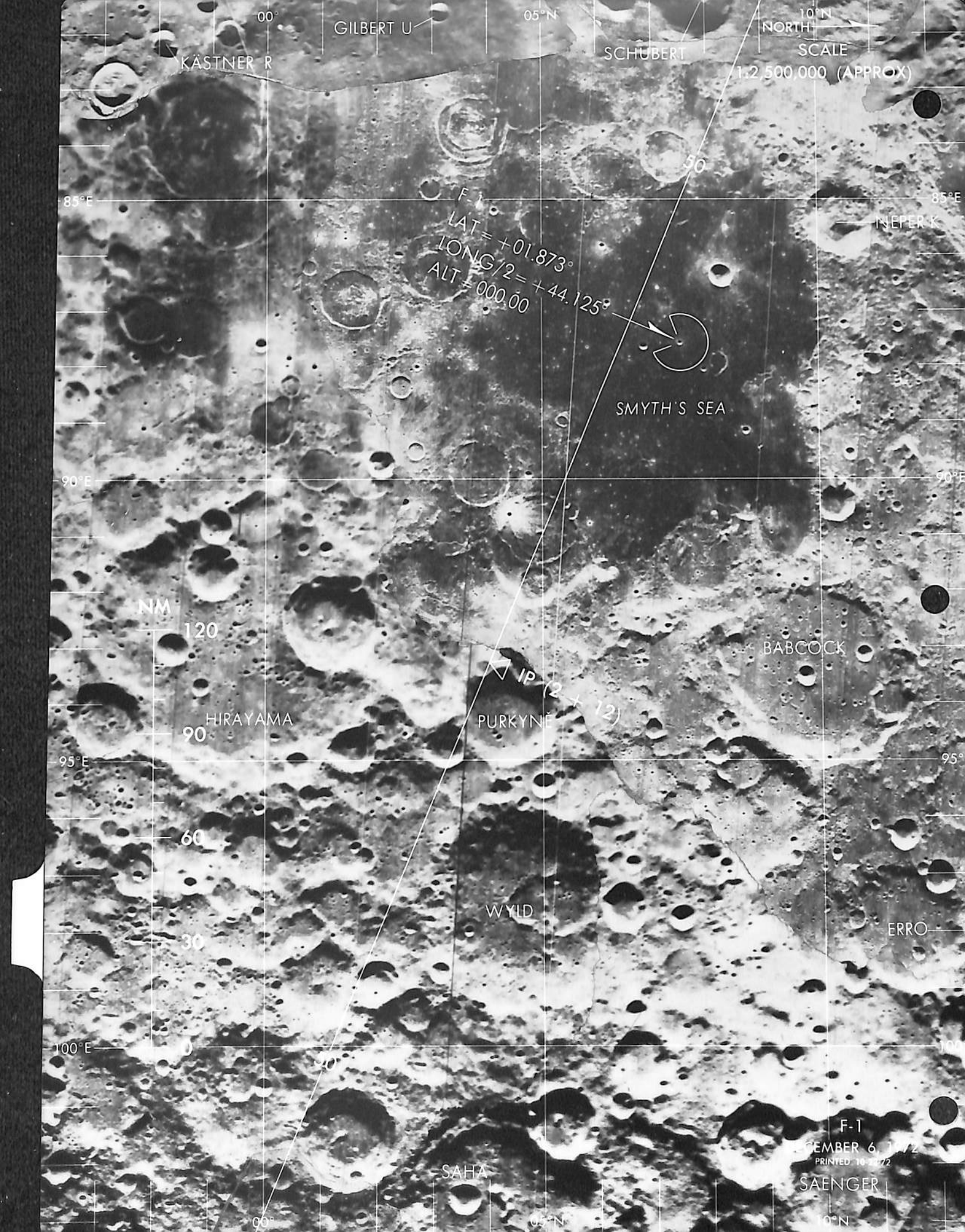
SCALE
1:1,175,000 (APPROX)

F-1
LAT + 01.873°
LONG/2 + 44.125°
ALT 000.00



F-1
DECEMBER 6, 1972
PRINTED 10-14-72

F-1


00°
GILBERT U
05°N
10°N
NORTH
SCALE
1:2,500,000 (APPROX)
KÄSTNER R
SCHUBERT
30
85°E
F-1
LAT = +01.873°
LONG/2 = +44.125°
ALT = 000.00
INEPER K
SMYTH'S SEA
90°E
NM
120
BABCOCK
IP (2 + 12)
HIRAYAMA
90
PURKYNĚ
95°E
60
WYLD
ERRO
30
100°E
0
SAHA
SAENGER
F-1
PRINTED 10-9-72

VISUAL TARGETS INDEX

TARGET	REV	TAB
COPERNICUS	1 & 28	COPER
LANDING SITE	15, 40 & 62	SITE
AITKEN	27	AITKEN
ARABIA	27	ARABIA
CRISIUM-SERENITATIS	27	CRIS-SER
REINER γ	28	REIN γ
D CALDERA	40	D CALD
MARE SMYTHII	62	SMYTHII
TSIOLKOVSKY	64	TSIOLK
EULER HILLS	*73,74	EULER
KOROLEV	* 2-5	KORO
GAGARIN	* 55,61-63	GAGAR
PASTEUR	*55, 61-63	PAST
POST-TEI	* after 75 !!	TEI

*target not nominally scheduled

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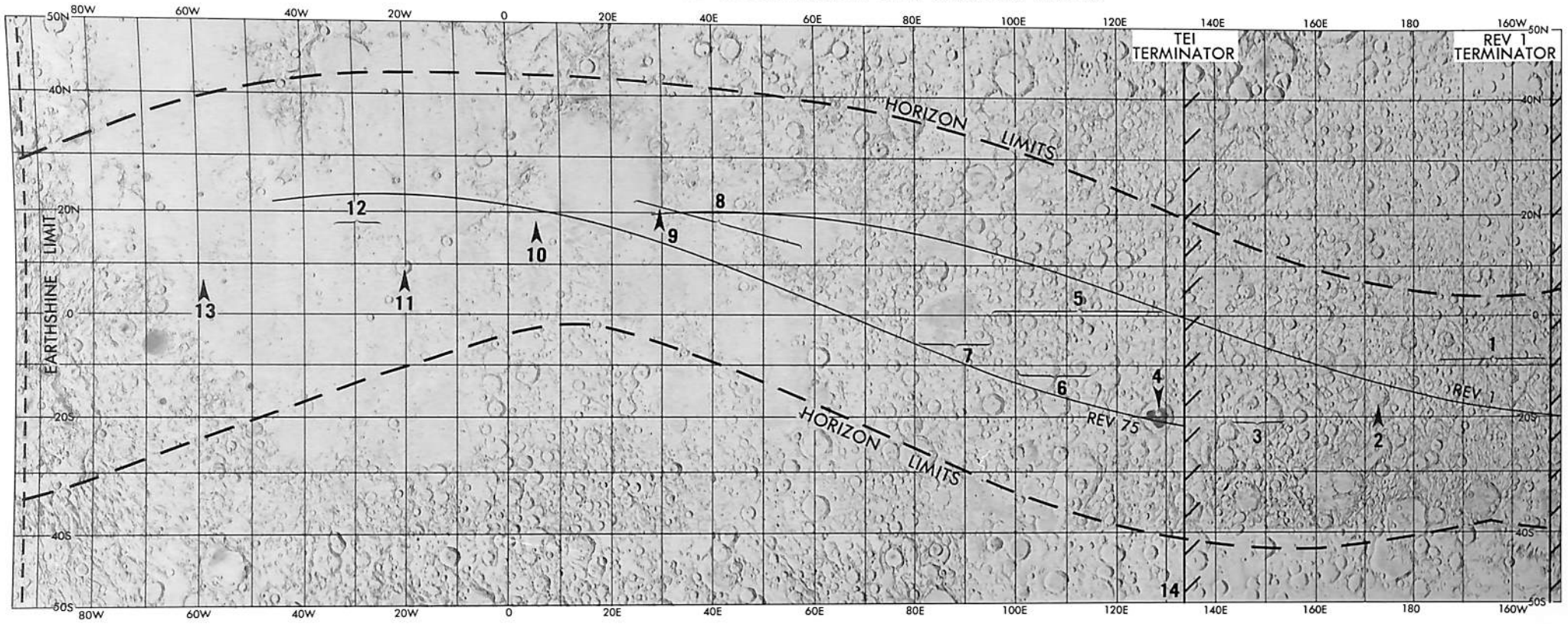
11-16-72

VISUAL TARGETS

APOLLO 17 VISUAL OBSERVATION SITE GRAPHIC INDEX



1. KOROLEV (2 graphics) 2–5
2. AITKEN (3 graphics) 27
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4. TSIOLKOVSKY (5 graphics) 64
5. ARABIA (3 graphics) 27
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9. LANDING SITE (4 graphics) 15, 40, 62
10. D-CALDERA (2 graphics) 40
11. COPERNICUS (3 graphics) 1, 28
12. EULER HILLS (1 graphic) 73, 74
13. REINER γ (2 graphics) 28
14. POST TEI VIEW (2 graphics) after 75!!

O unscheduled targets

1st EDITION NOVEMBER, 1972 (DMAAC)

COPERNICUS (1 of 3)

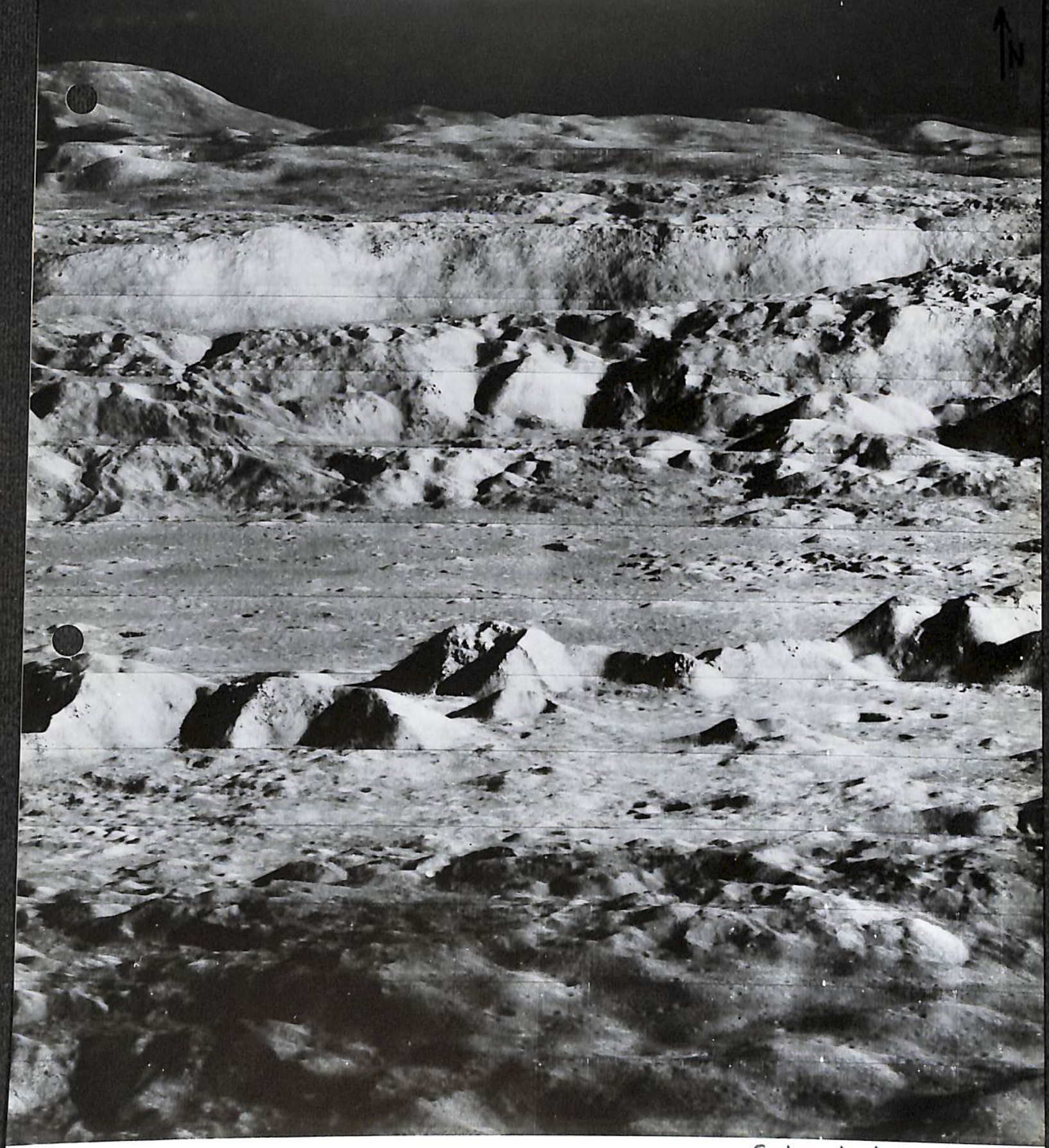
Use photograph to identify features for observation in Earthshine.

1ST EDITION NOVEMBER, 1972 (DMAAC)

COPERNICUS (2 of 3)

Study the floor of Copernicus and compare its material to that on the wall terraces.

1ST EDITION NOVEMBER, 1972 (DMAAC)



COPERNICUS (3 of 3)

Crater about 3 Km deep
Central peak 400 m high

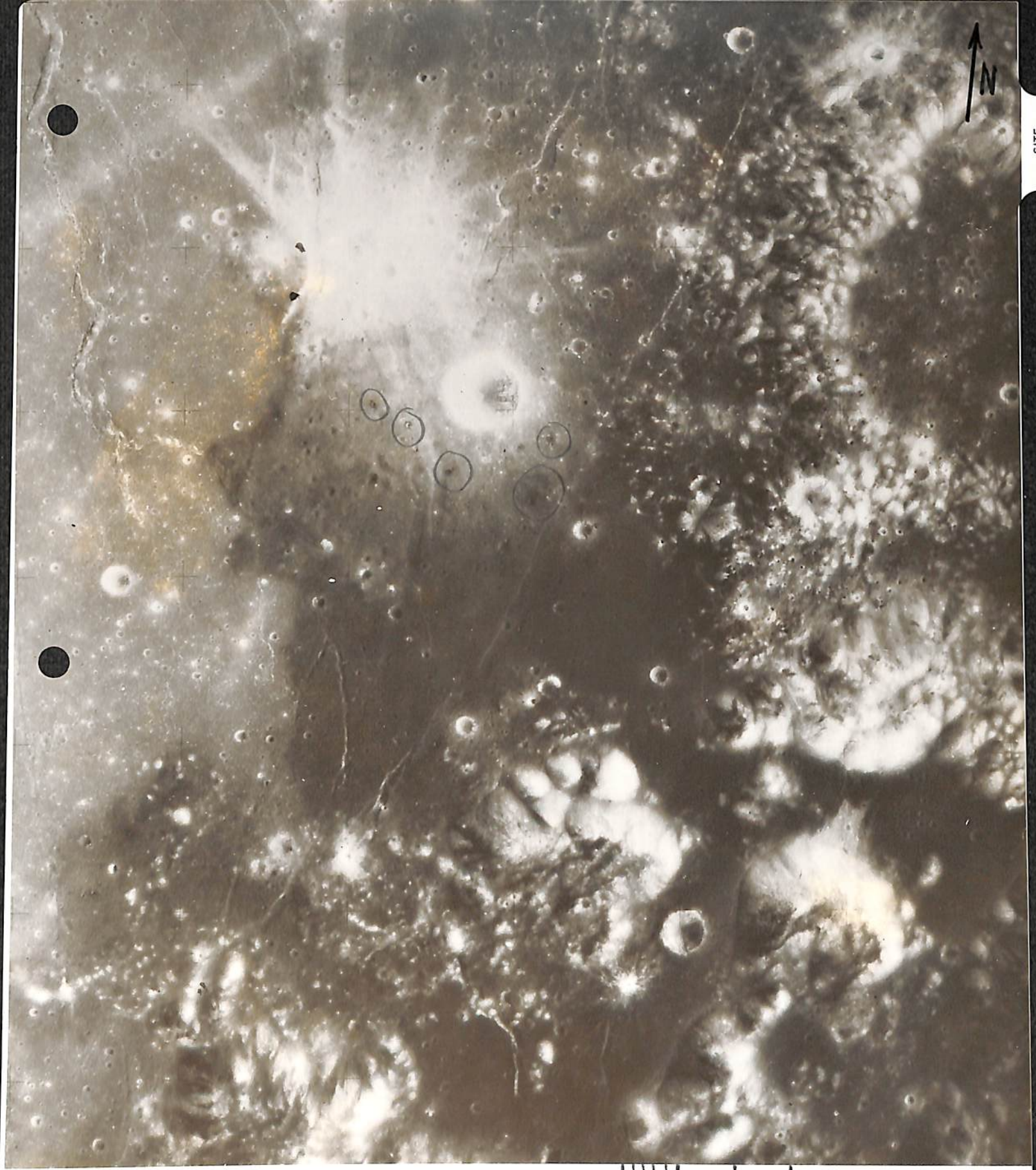
When viewed from the opposite direction is there an extension of the structure in the middle central peak? What is the nature of that structure?

1ST EDITION NOVEMBER, 1972 (DMAAC)

LANDING SITE (1 of 4)

1. In the highland units east of the Serenitatis basin, compare the color and texture of massif units to the sculptured hills.
2. Compare the dark mantle to the Serenitatis mare material (texture and color).
3. Compare the colors of the Serenitatis annulus to the material in the inner basin.

1ST EDITION NOVEMBER, 1972 (DMAAC)



SITE

LANDING SITE (2 of 4)

1. Look for definitive sources of the dark mantle.
2. What is the age relationship between the dark deposit and the following:
   a. The Littrow Rilles?
   b. The Serenitatis mare material?
   c. The concentric mare ridge system?

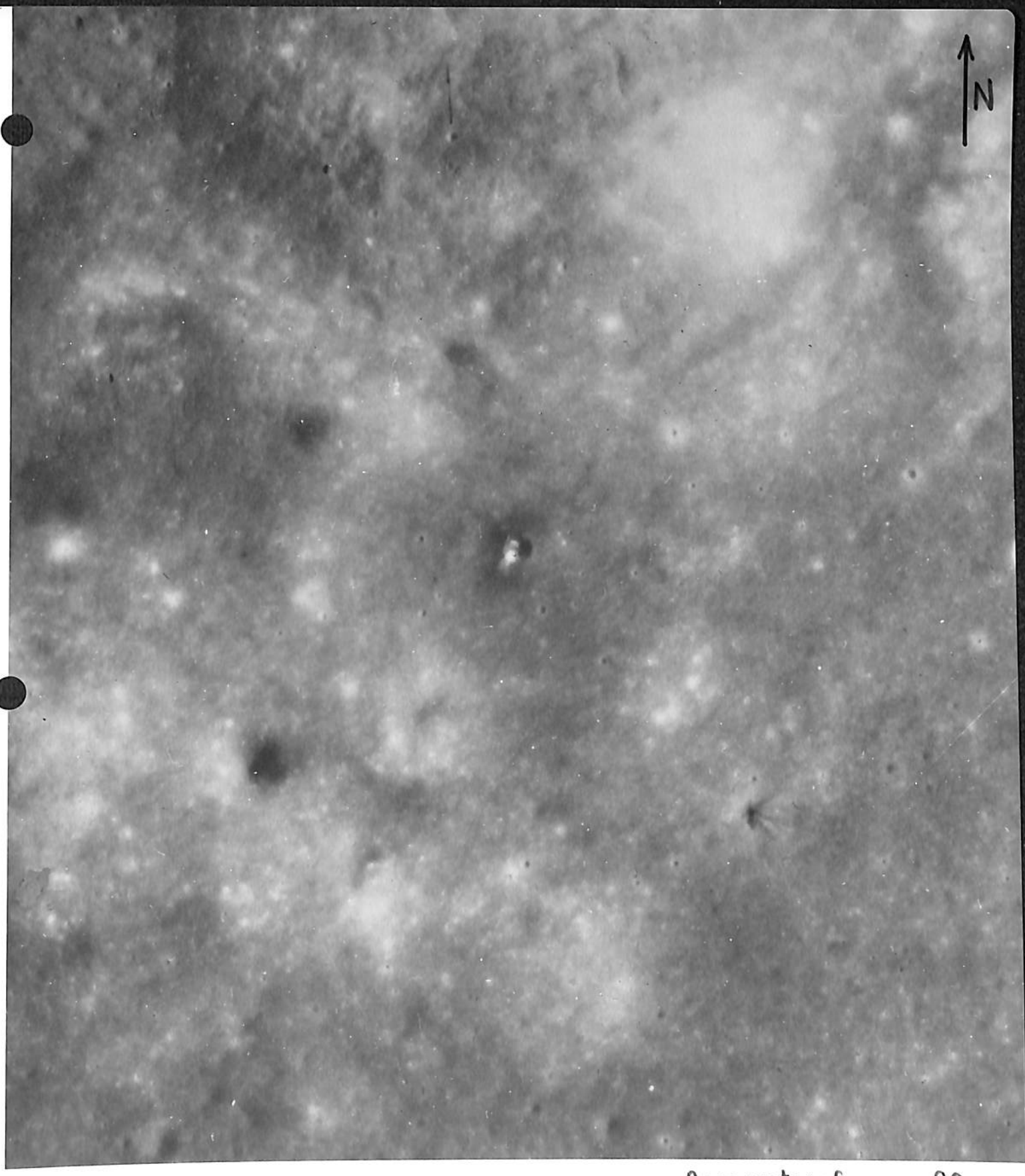
1ST EDITION NOVEMBER, 1972 (DMAAC)

LANDING SITE (3 of 4)

0 500m 1Km

1. Are there any structures on North and South Massifs that may be visible from the ground? (layers, ledges, blocks, color boundaries)
2. How common are small scale undulations on the landslide? (Any comments on trafficability?)
3. Do craters of the Pentagon appear to expose pre-mantle material? (Where are the best exposures?)
4. What are the likely sources of the dark mantle in the area? (dark halo craters, irregular depressions)
5. Are the irregularities of the scarp due to mare ridge-like construction or "en echelon faulting"?(Any comments on continuations?)

1ST EDITION NOVEMBER, 1972 (DMAAC)



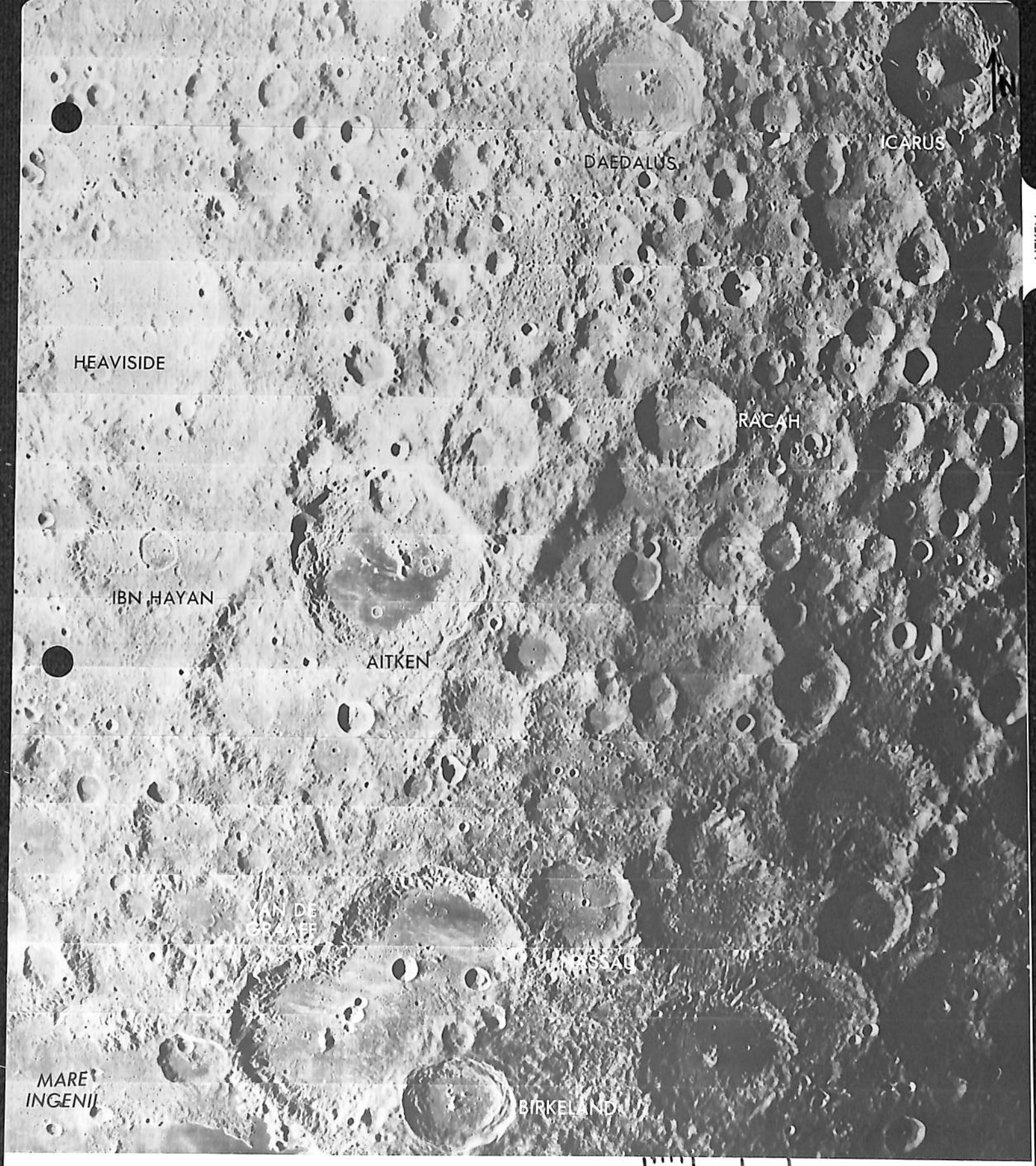
LANDING SITE (4 of 4)

Apex crater of cone = 80 m

Is F Crater a cinder cone? Use binoculars to study the following:

1. Shape of crater profile.
2. Rim crest and probable breaching.
3. Smoothness and distribution of rim deposits.
4. Superposition relationships with Family Hill.

1ST EDITION NOVEMBER, 1972 (DMAAC)

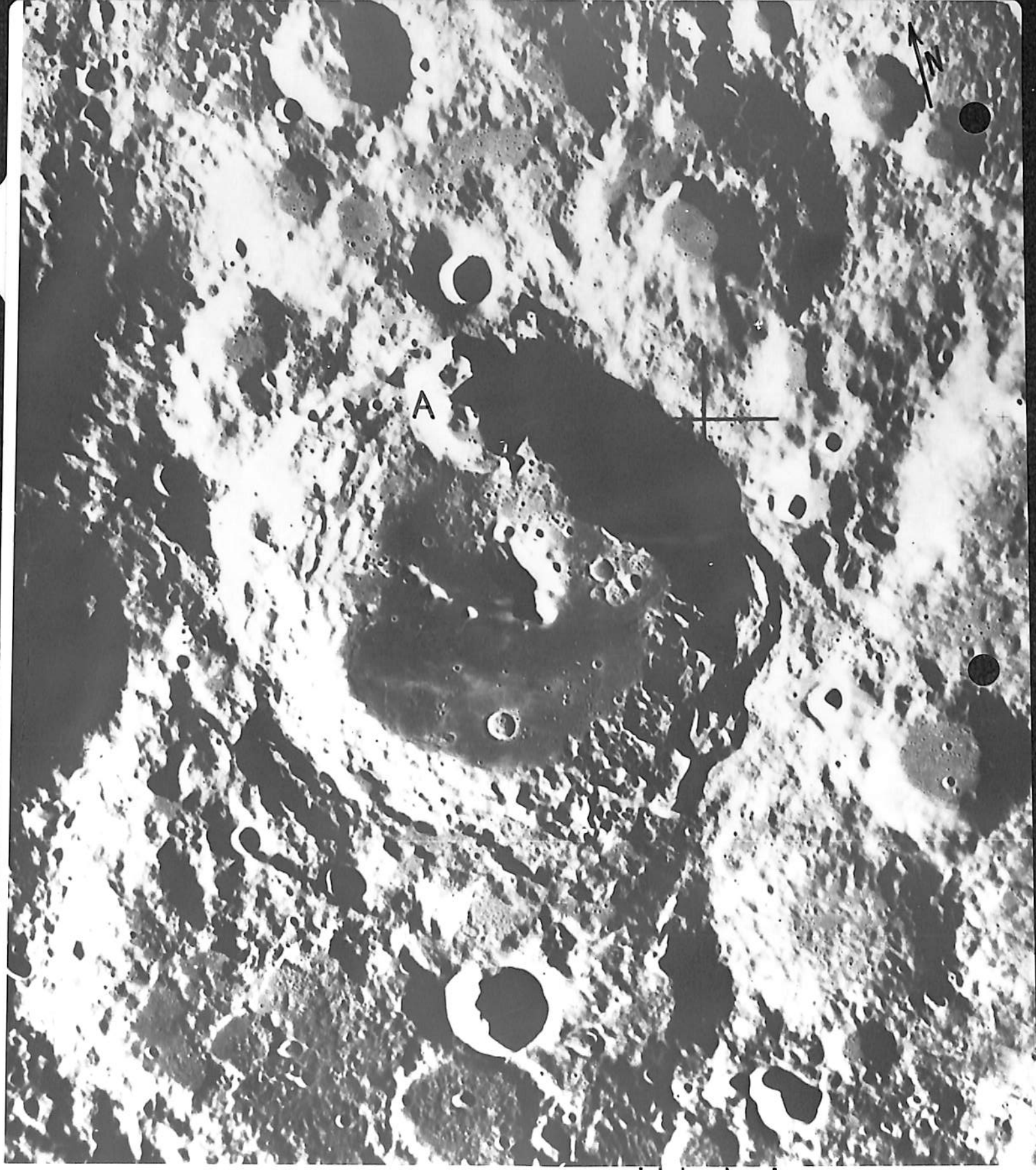


AITKEN (1OF 3)

Determine the relative age of the crater based on:

1. Freshness of wall and ejecta materials.
2. Brightness of rim deposits.
3. Extent of rays and/or secondary crater chains.

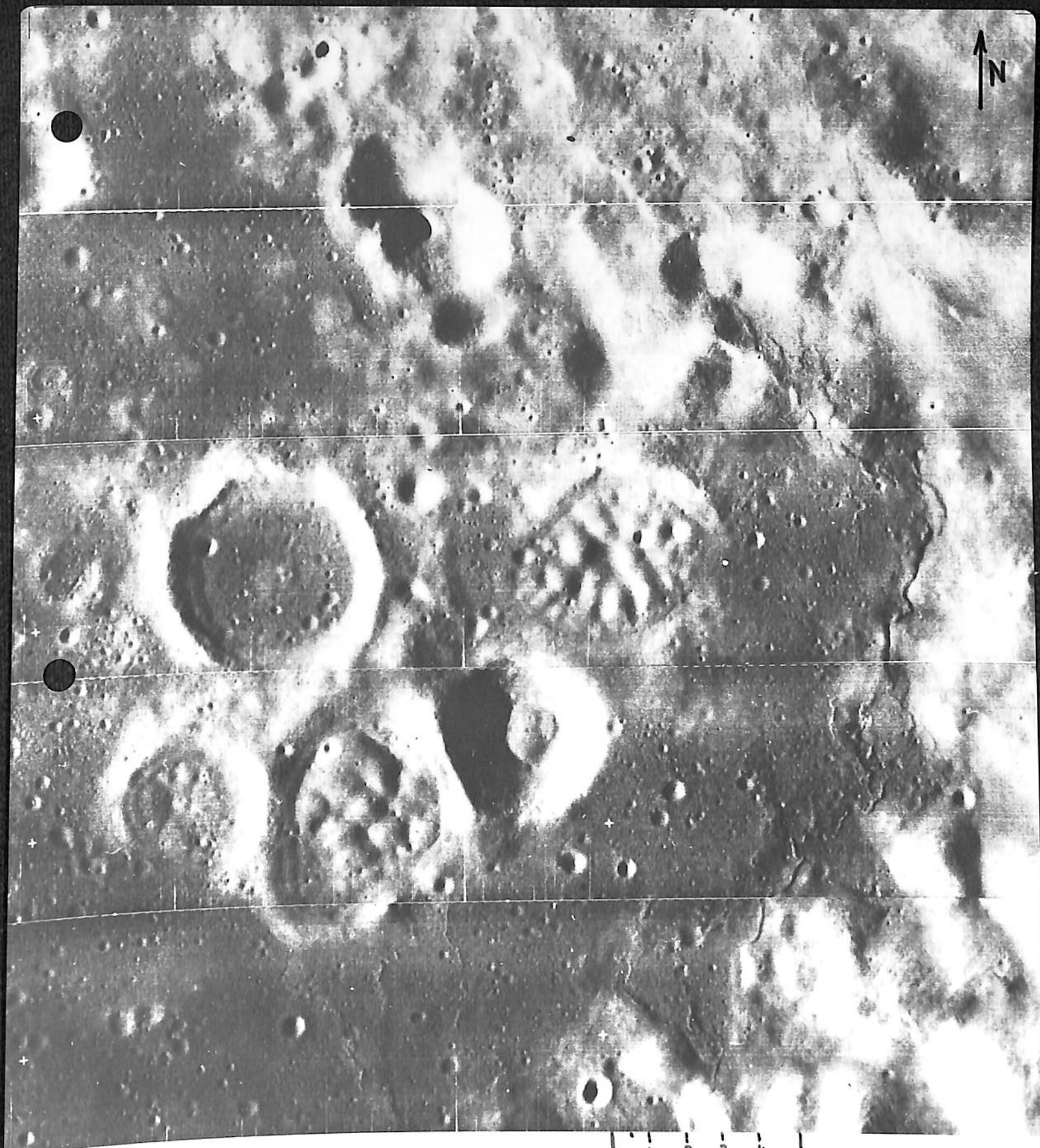
1ST EDITION NOVEMBER, 1972 (DMAAC)



AITKEN (2 of 3)

Examine the interior of crater Aitken with emphasis on the following:

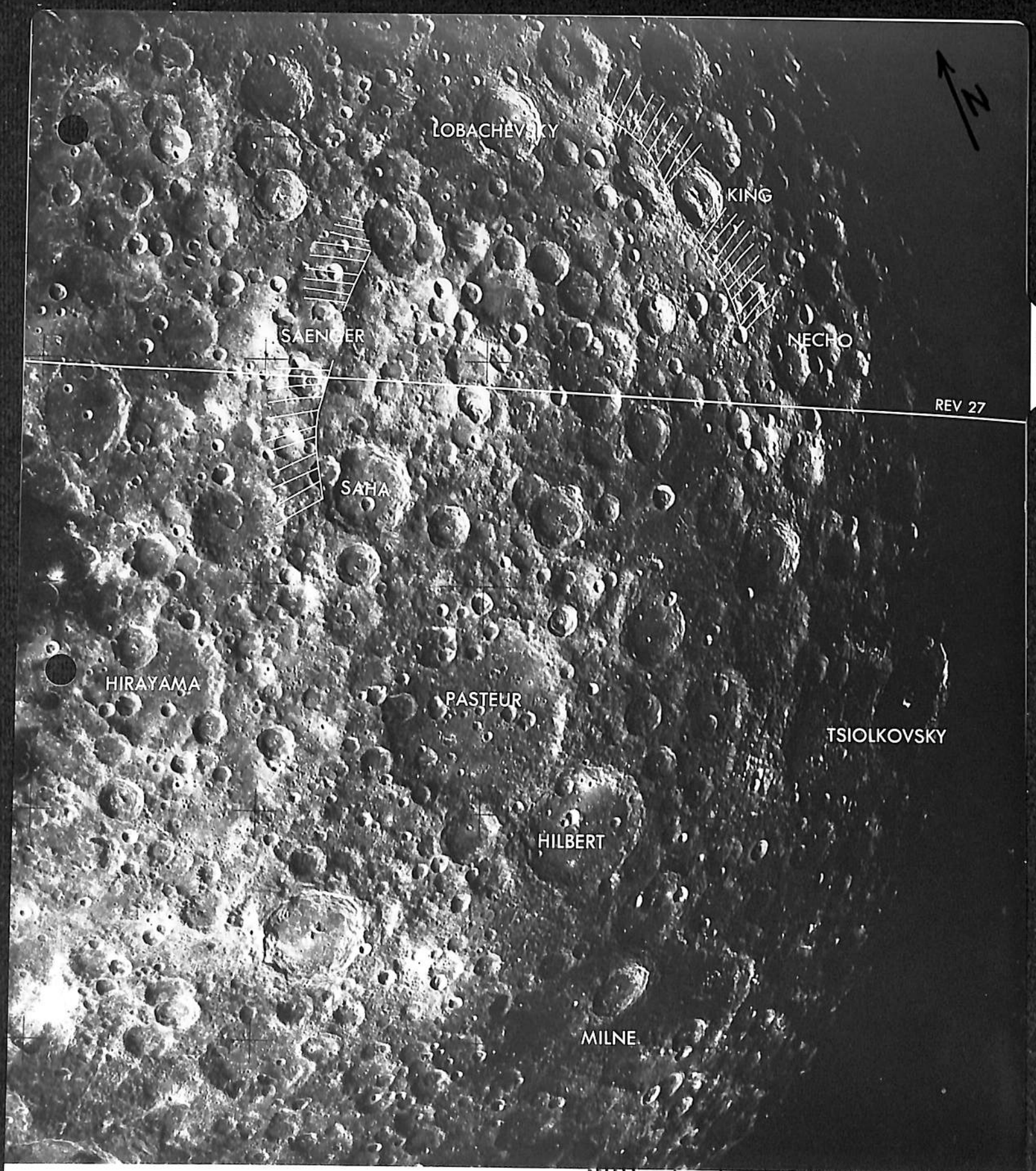
1. Albedo, textures, and structures of the dark floor fill; compare with floors of surrounding craters.
2. Nature of light swirls in the southwest quadrant of the floor.
3. Structures and rock exposures on the central peak, and possible "lava marks."



AITKEN (3 of 3)

Study the clover-leaf cluster of craters in the eastern part of the floor:

1. What are the grape-like domical hills inside the craters? (Are they volcanic plugs and domes or fractured floor material?)
2. Are the individual crater rims symmetrical and are they layered? (Any lava marks?)
3. Is there a relationship between the dark floor material (that terminates in scarps to the east) and the crater cluster?



ARABIA (1 OF 3) 0 50 100 150 200

250 Km = Pasteur

Is there an observable topographic rise associated with the middle ring of Arabia basin? Note particularly the areas north and south of the craters King and Saenger.

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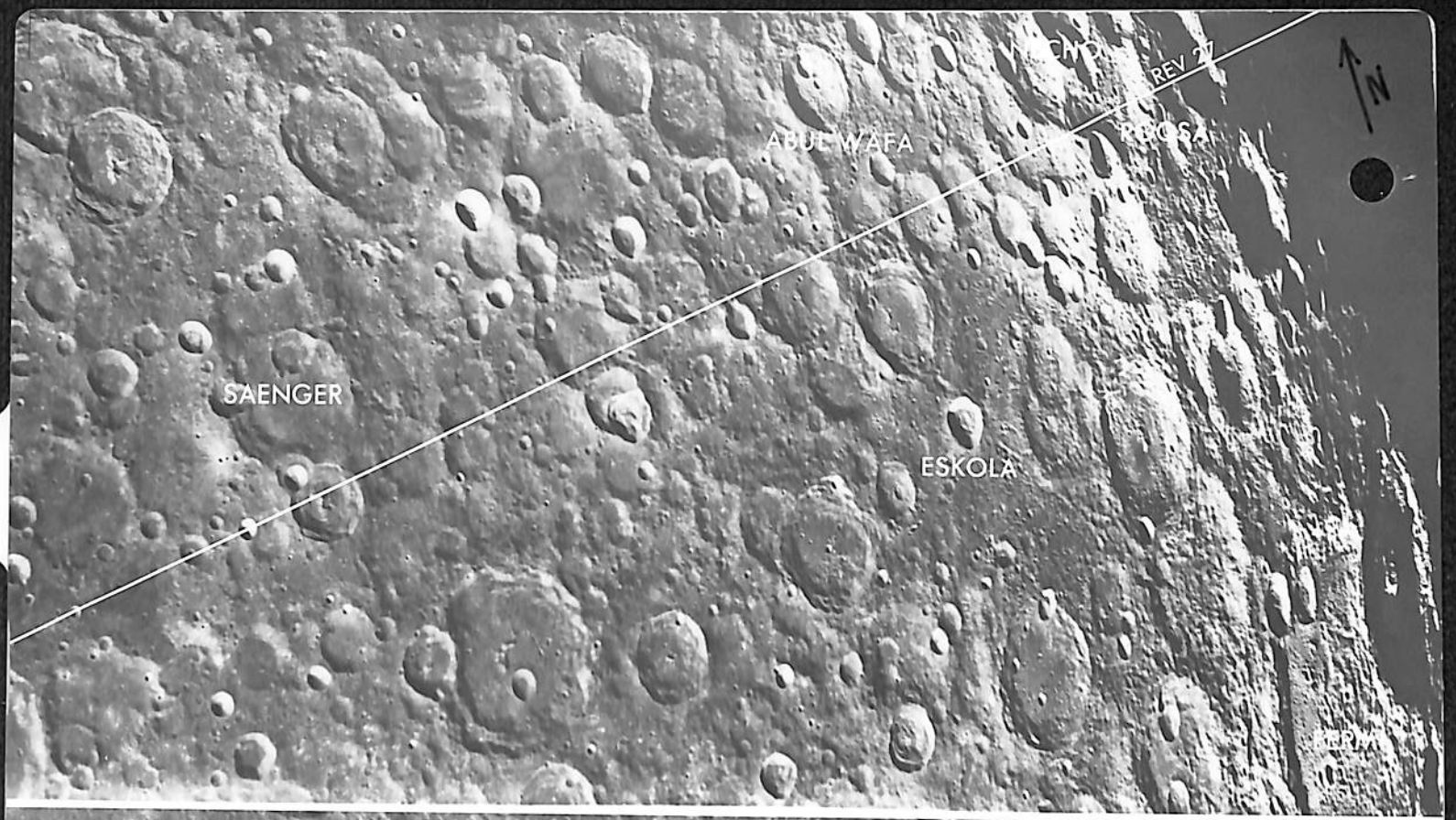

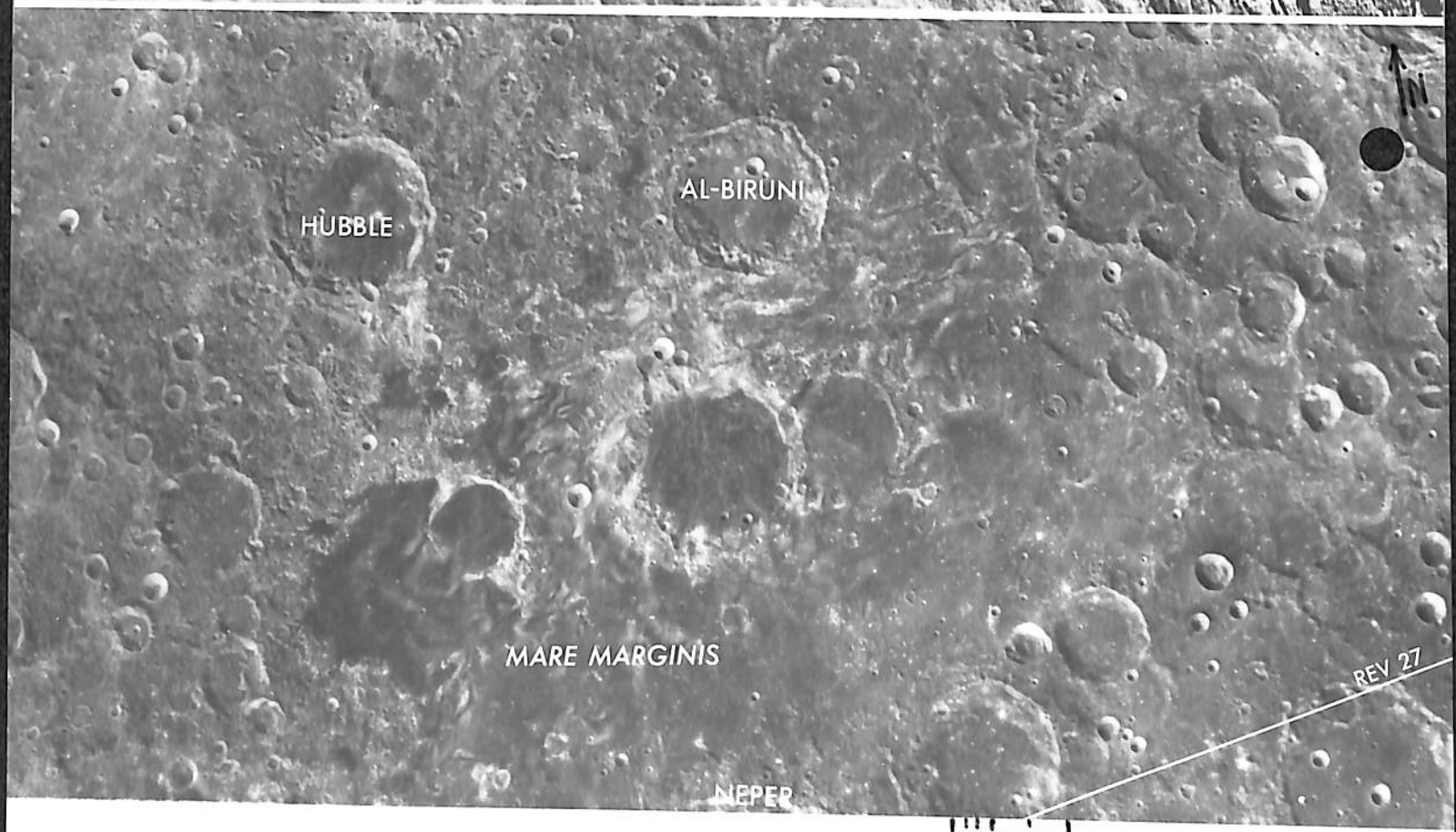

ARABIA (2 of 3)

0 30 60 90 Km = Al-Biruni

Study the light colored swirls in the highlands from Abul Wafa to Al-Biruni. Compare with the sinuous markings in Mare Marginis.

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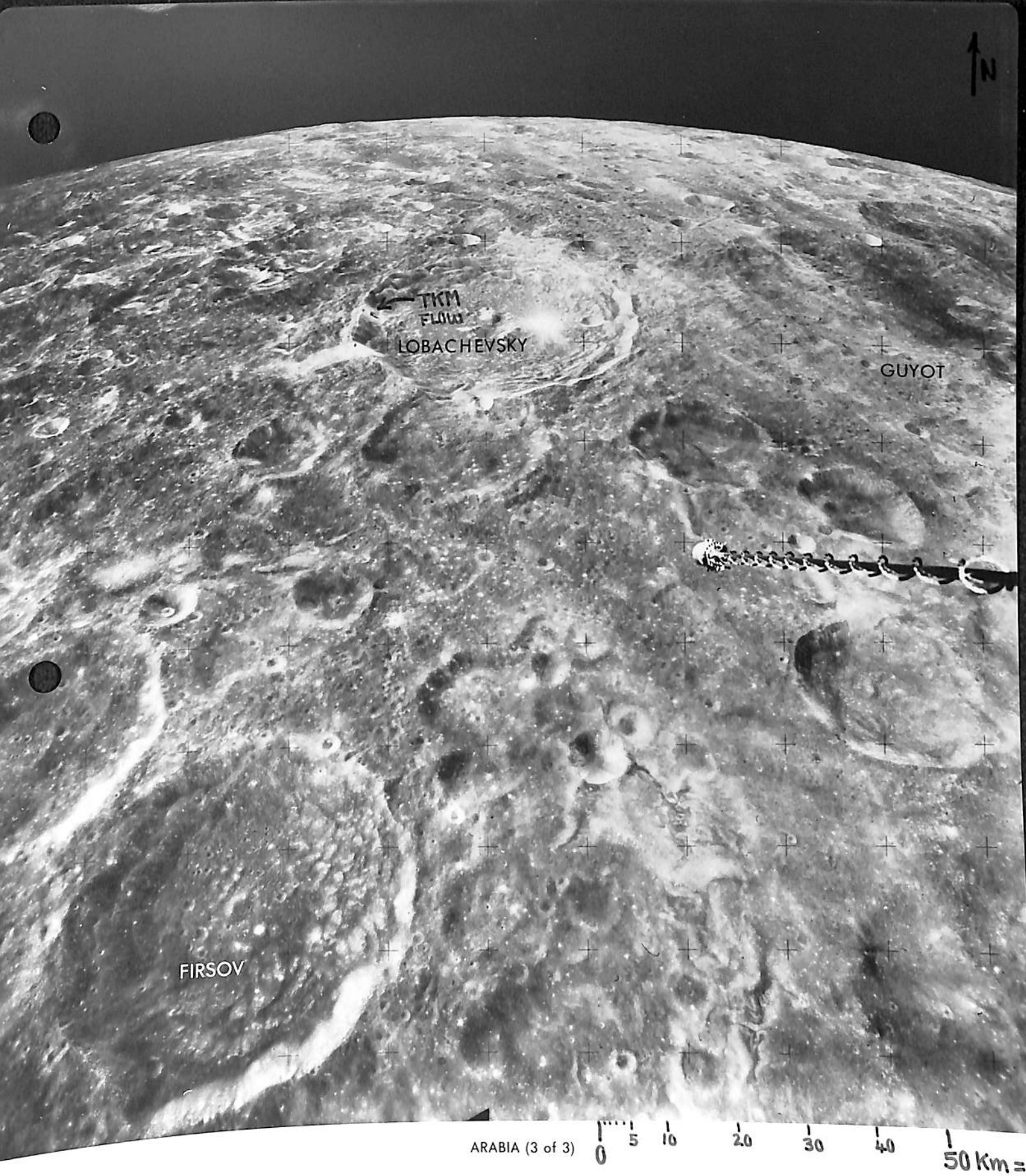

ARABIA (3 of 3)

1. Study the swirls northwest of Abul Wafa:
   a. Are there any topographic expressions associated with them?
   b. Are their boundaries sharp or gradational?
   c. Are they more textured and rougher than the surrounding material?
2. Compare the swirls to:
   a. Bright ejecta of the crater King to the east.
   b. Rays of Giordano Bruno to the north.
   c. Bright patch on the southwestern rim of Lobachevsky.

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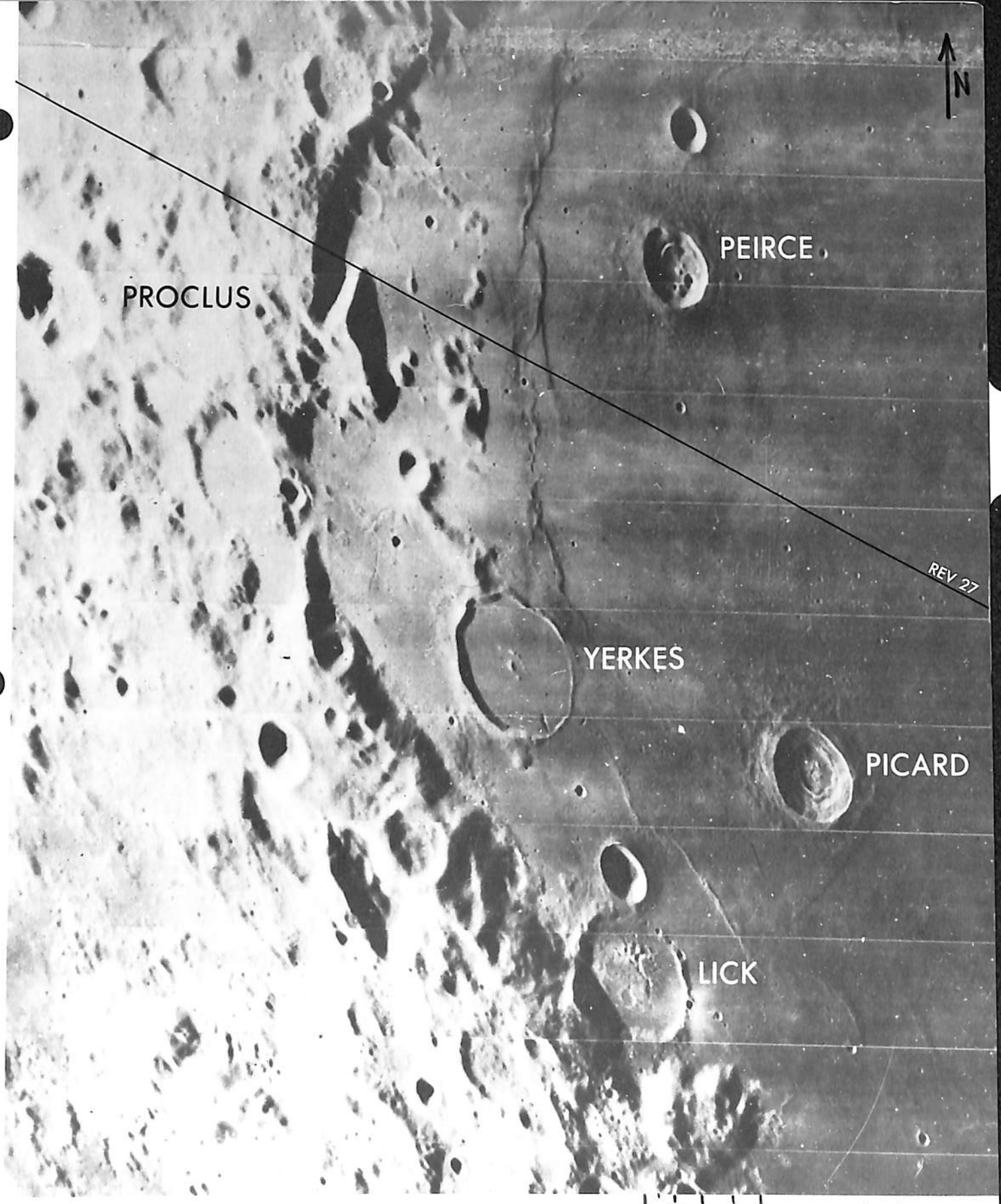

CRIS-SER

CRISIUM-SERENITATIS (1 of 5)

Determine the color boundary in western Mare Crisium.

1. Color tones or shades between units.
2. Location of color boundary relative to the mare ridge system. (Does ridge cross color boundaries?)

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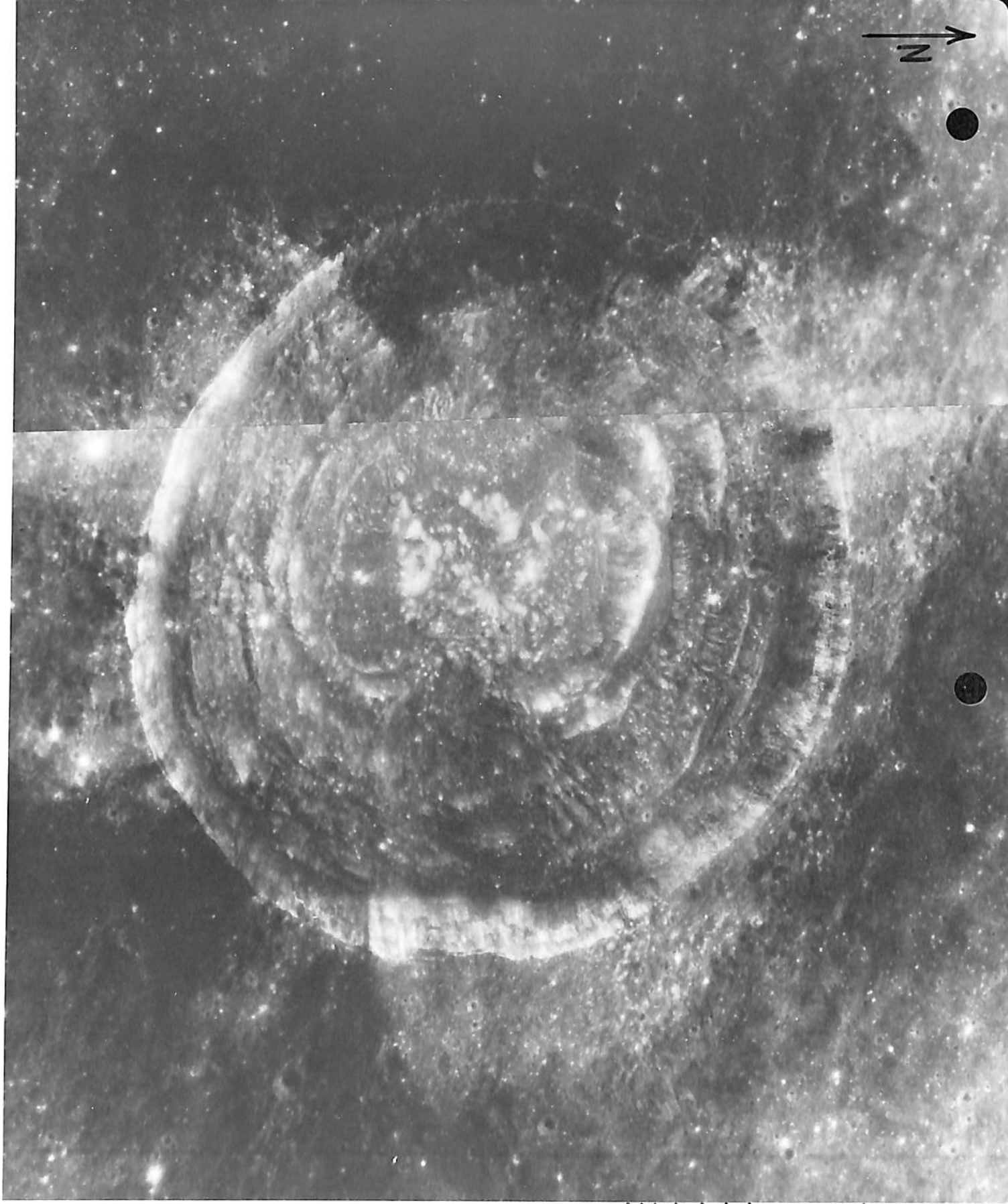

CRISIUM-SERENITATIS (2 OF 5)

1. Compare the color of the rim deposits of the crater Picard to that of the surrounding mare material.
2. Examine the inner terraces of Picard for color variations and layering.
   (Can you determine different units based on color and slope characteristics?)
3. Compare the central peak material to that of the crater walls and surrounding material.

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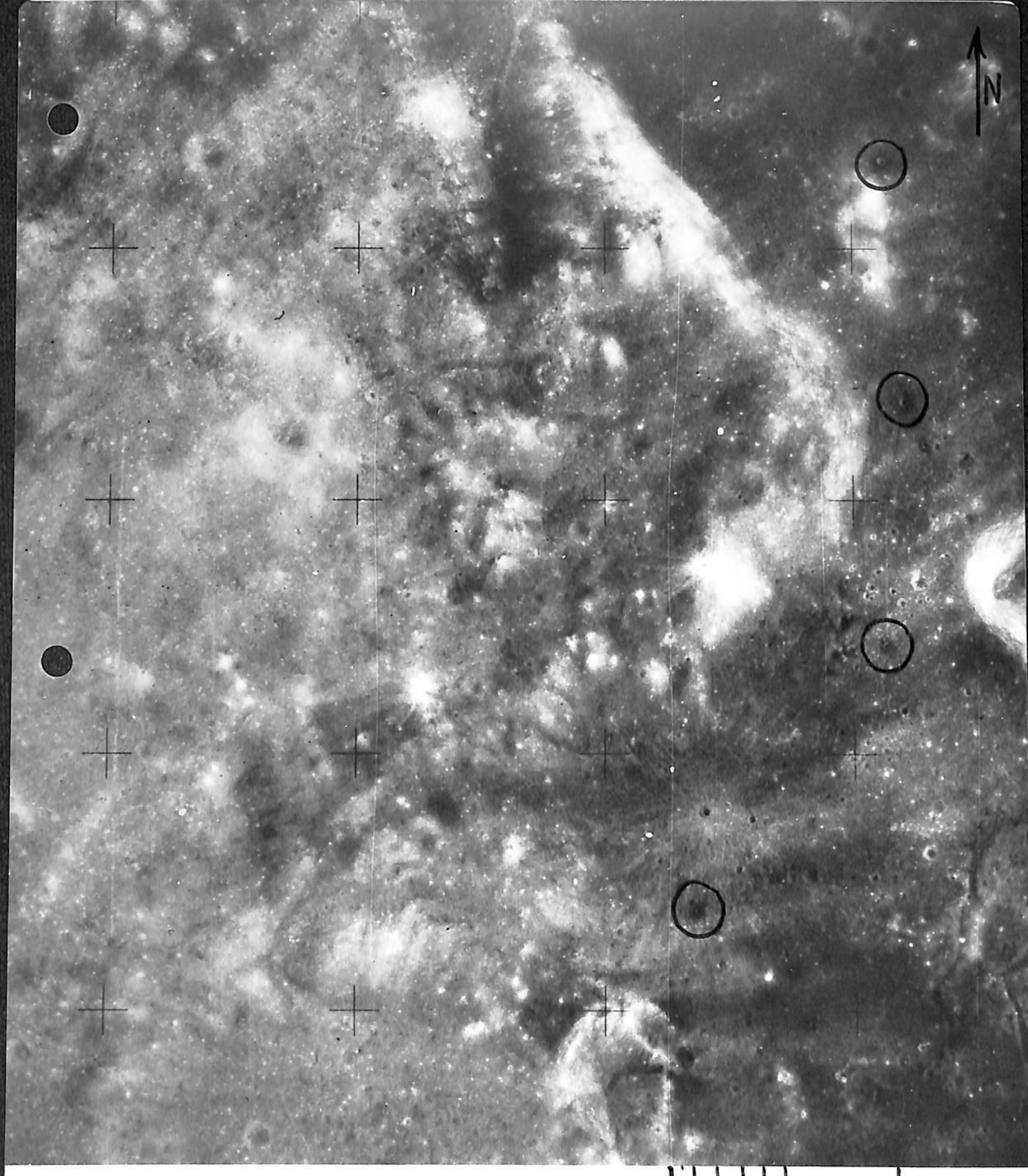

CRISIUM-SERENITATIS (3 of 5)

Examine the dark halo craters in western Mare Crisium. (Are they impact or volcanic in origin?)

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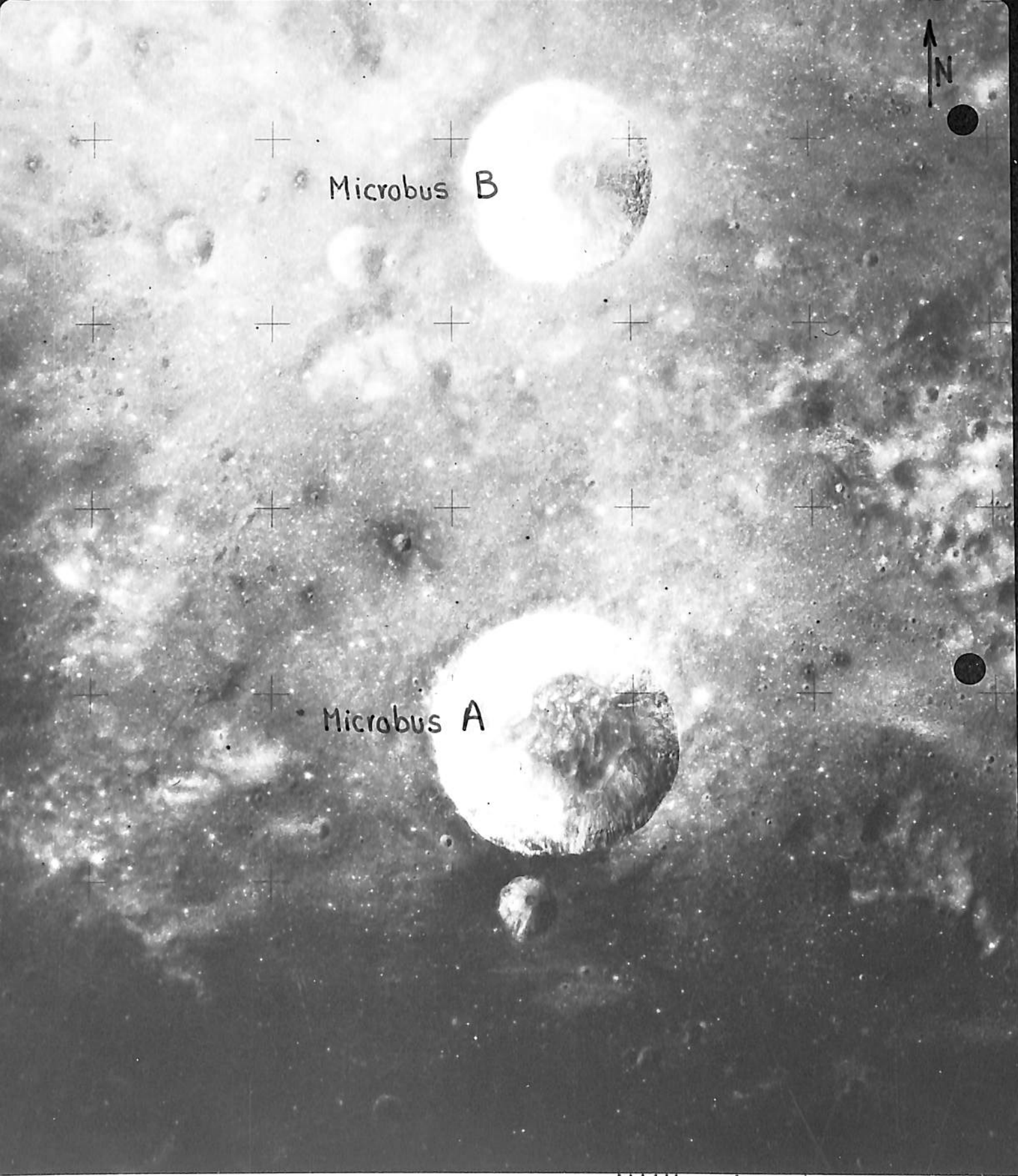

CRISIUM-SERENITATIS (4 of 5) 0 5 10 15 Km = Microbus B

Examine the dark halo craters west of Microbus, especially around Microbus A. (Are they impact or volcanic in origin?)

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CRISIUM-SERENITATIS (5 of 5)

1. Compare the floor fill of Maraldi to light plains in Maraldi E.
2. Compare the albedo, texture and structure of Maraldi γ to those of the sculptured hills.
3. Examine the floor of Vitruvius A and compare the domical hills to those in the floor of the crater Aitken.

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REINER

REINER γ (1 of 2)

1. Is there any topographic expression associated with the brightness?
2. Any texture and roughness associated with the feature?
3. What (I.T.H.) is it?

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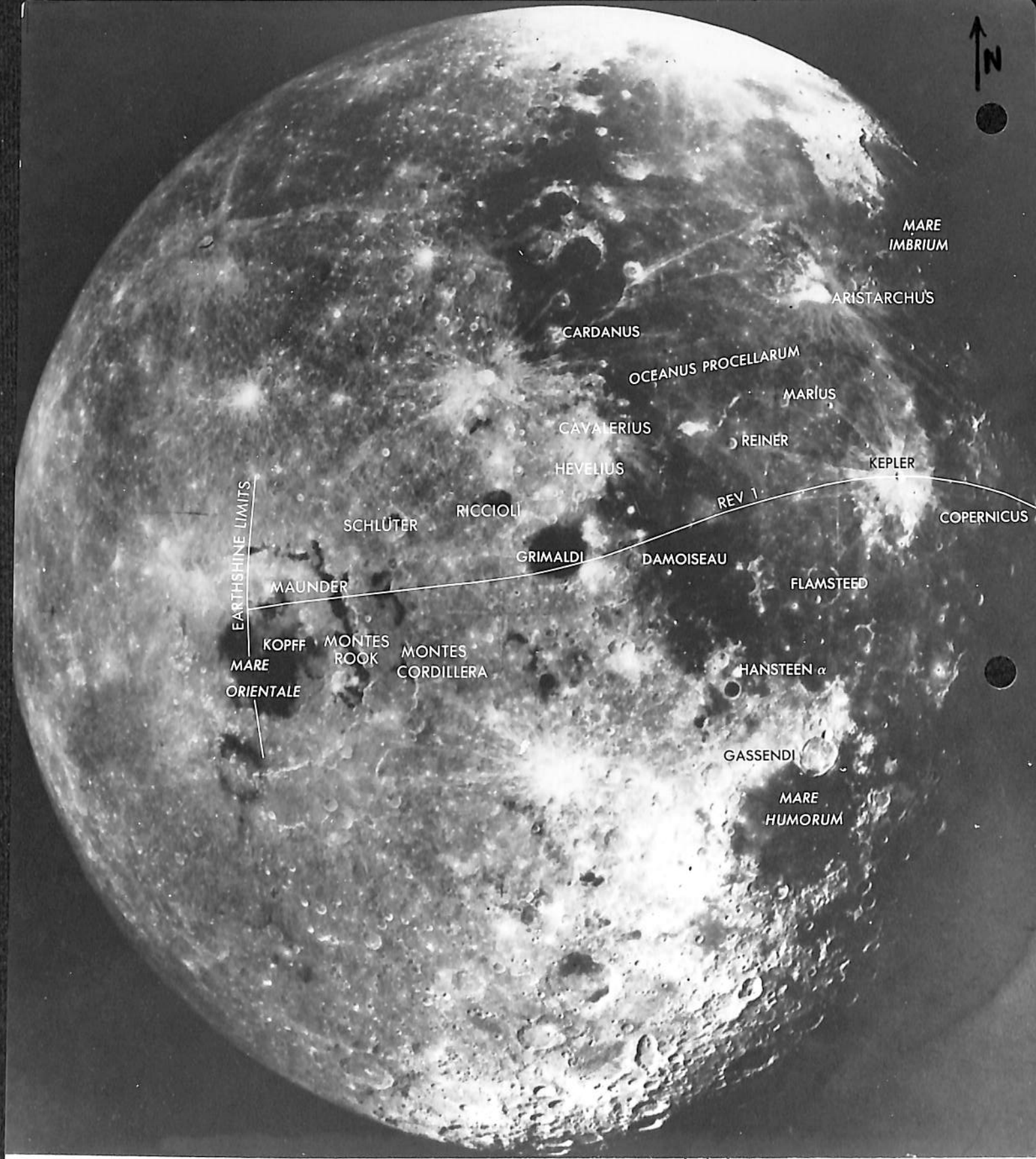

REINER γ (2 of 2)

0 50 100 150 Km = Grimaldi

Use photograph to identify in the western part of the Moon features to be observed in Earthshine.

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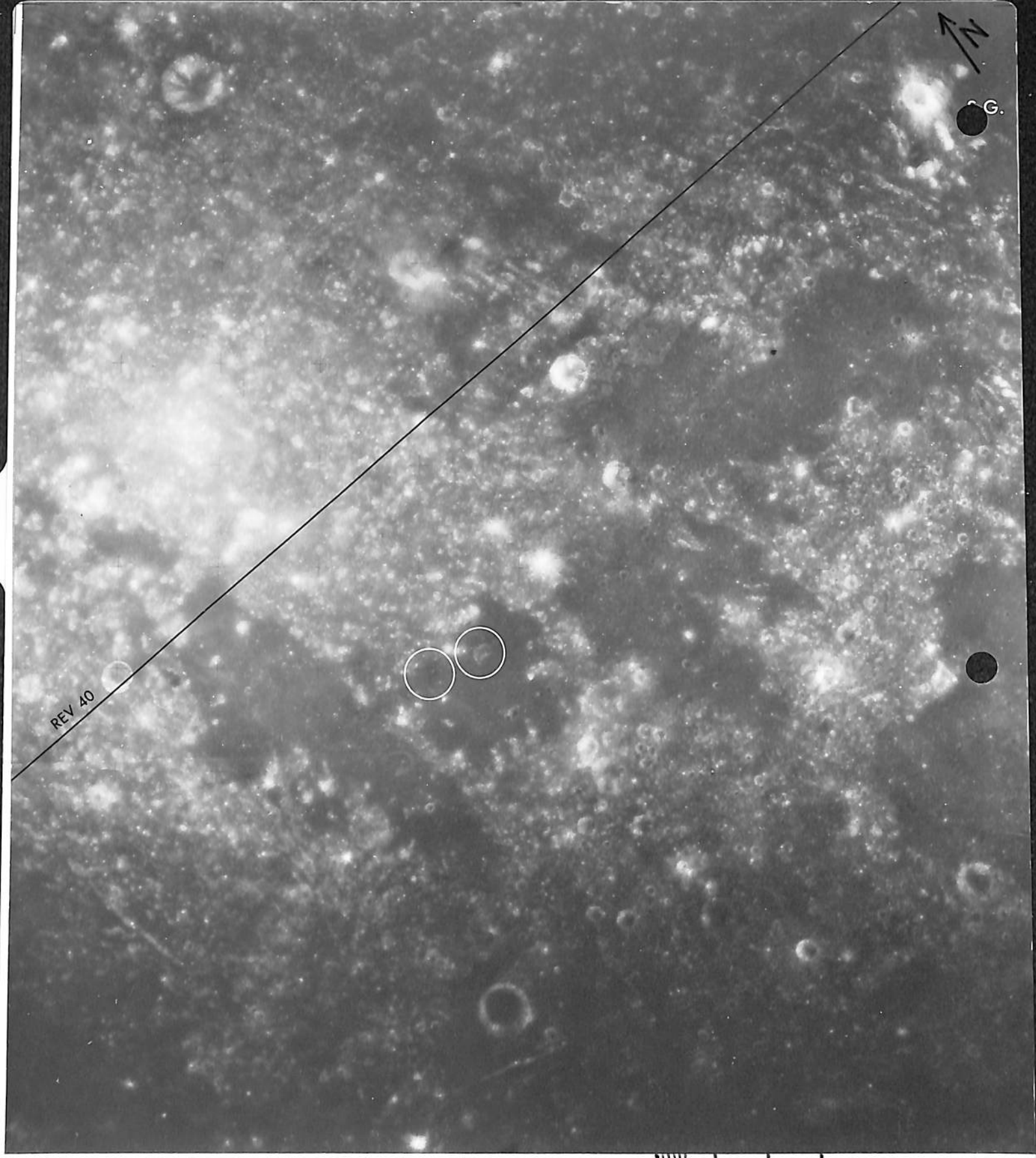

D-CALDERA (1 of 2)

1. Compare the Sulpicius Gallus Formation to the mare-like patches atop the Haemus Mountains.
2. Determine the source of the mare-like patches (any relationship to dark halo craters?)

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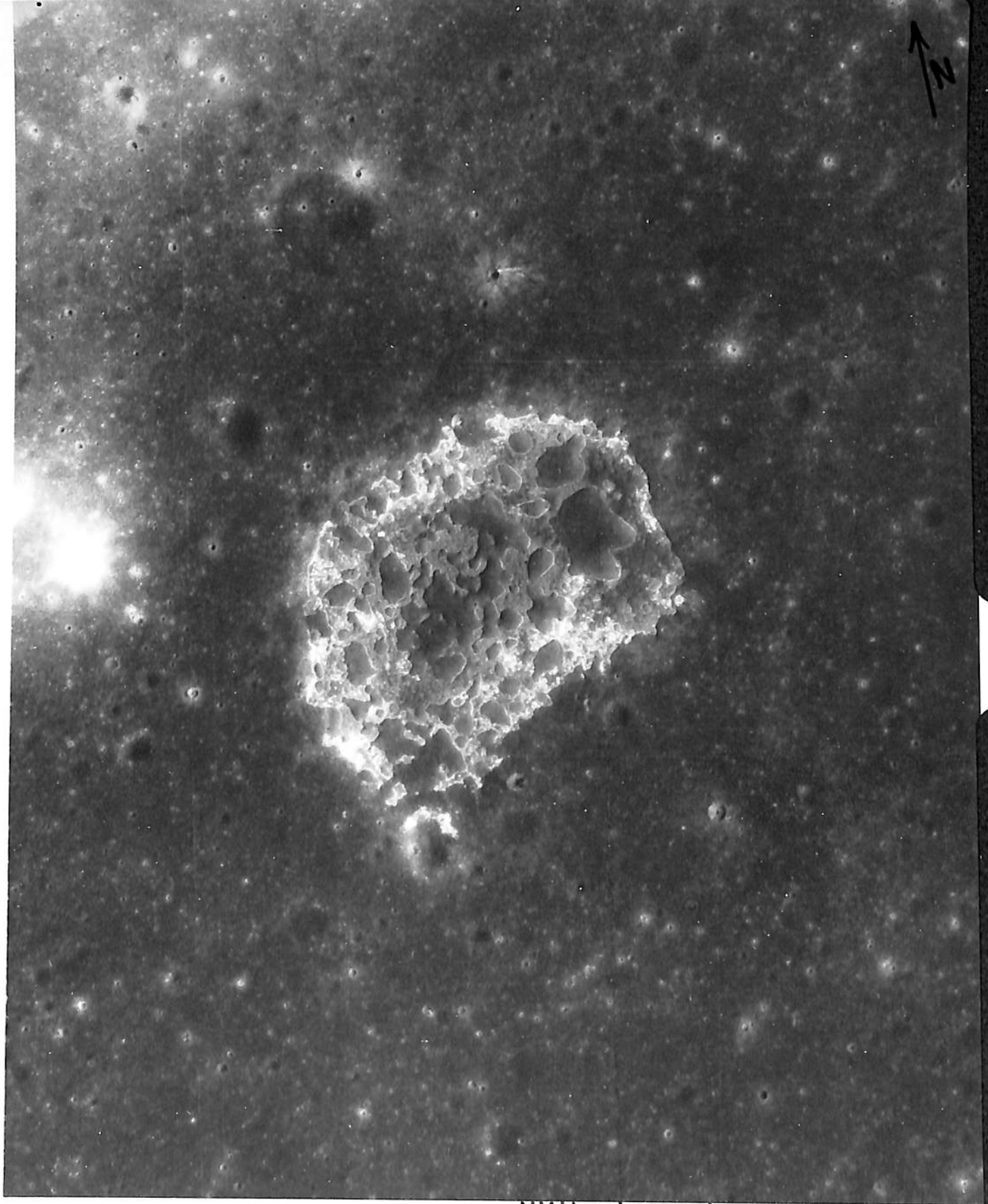


D CALD

D-CALDERA (2 of 2)

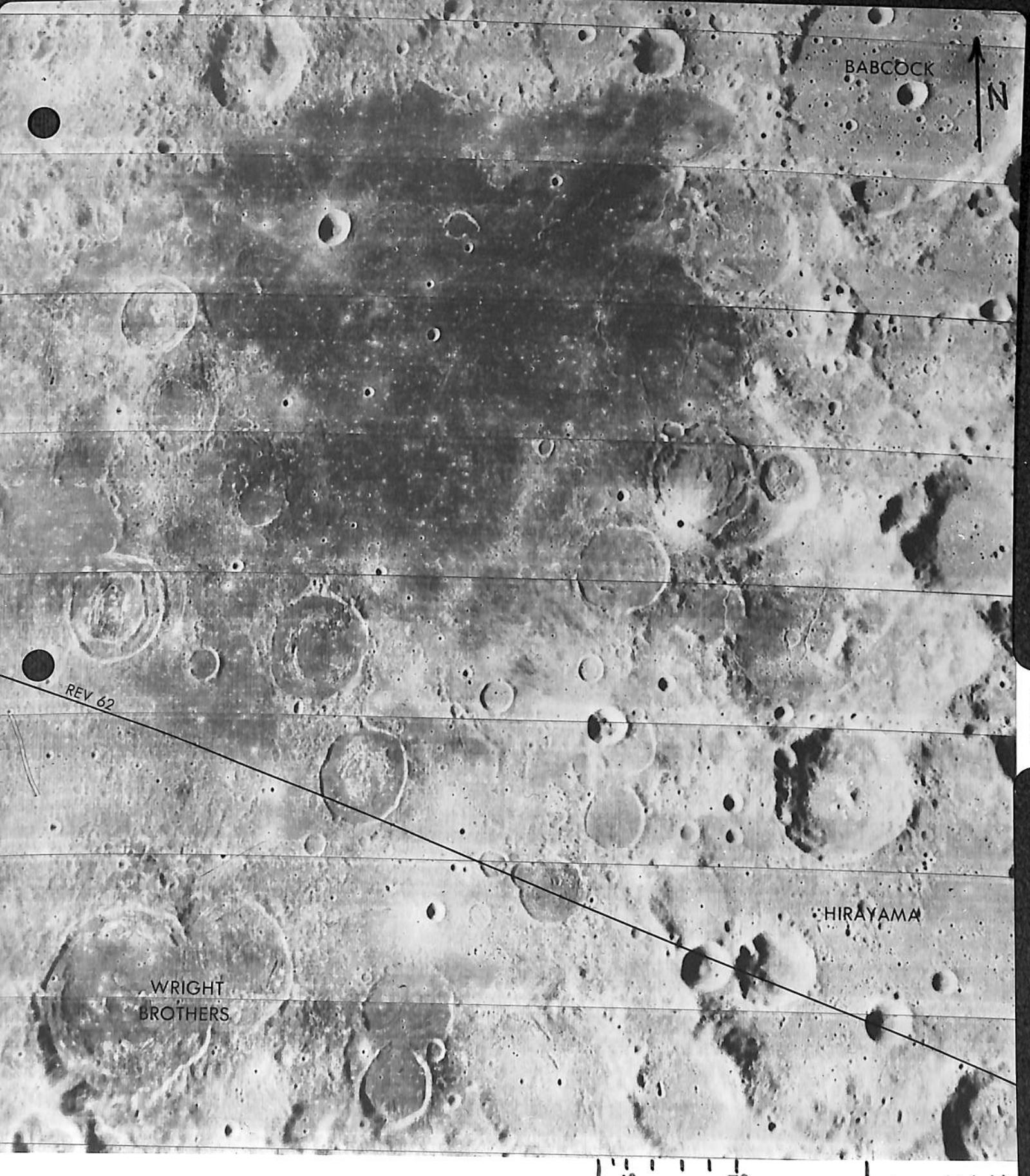
1. Determine color difference between D-shaped depression and its surroundings.
2. Use the binoculars to examine the internal structures of the D-shaped depression with particular attention to the following features in the floor:
   a. The light colored annulus.
   b. The blister-like prominences.

MESSIER

A. Visually study the Messier structure (in the Sea of Fertility) and describe the following:
   1. The raised lip.
   2. The dark and rough rim deposits.
   3. The median furrow.

B. Is there a source vent or hole? How big?

C. Why is the structure elongate?



Study the multi-ringed craters in Mare Smythii with particular attention to:

1. Symmetry of crater rim slopes.
2. Breaching of walls and resulting features (flow in or out?)
3. Inter-crater units and their relationships to the crater rims (impact ejecta, volcanic deposits, etc.)

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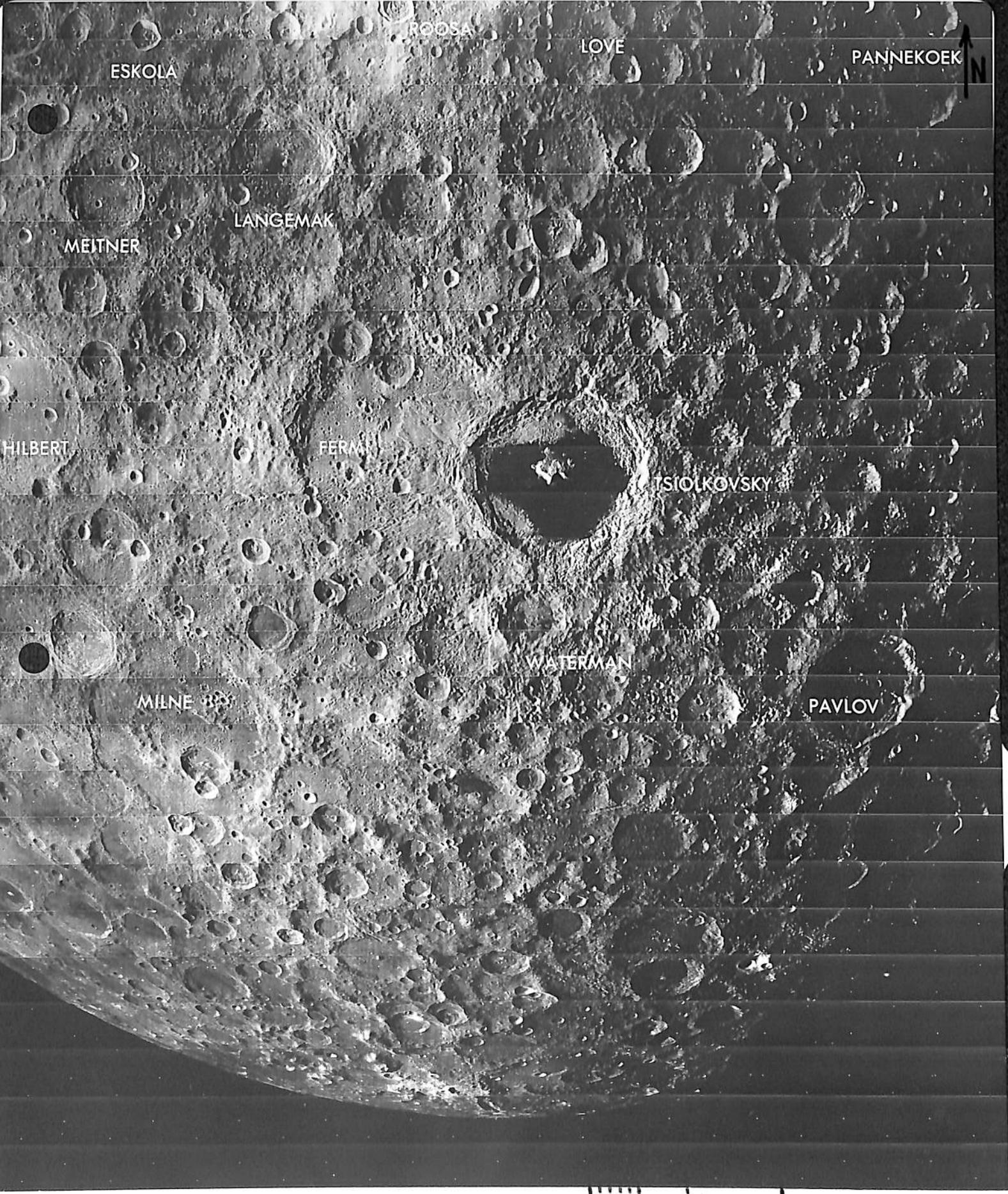

TSIOLK

TSIOLKOVSKY (1 OF 5) 0 50 100 200 Km = TsiolKovsky

Determine whether Tsiolkovsky is Imbrian or Eratosthenian in age based on rim brightness.

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TSIOLKOVSKY (2 OF 5)

0 5 20

40 Km = Central peak

1. Compare dark fill to light plains in the floor and determine age relationship.
2. Compare light floor plains to lineated unit on the northwestern rim.
3. Examine structures on central peaks and possible "lava marks".

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TSIOLKOVSKY (3 OF 5)

dy lineated unit on the northwest rim of Tsiolkovsky with special emphasis on:

1. Shape of the terminus (piled up, flat, etc.).
2. Probable origin of the numerous rimless craters on the lineated unit (subdued impacts, collapse or drainage depressions or gas release vents.)

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TSIOLKOVSKY (4 OF 5)

Examine the flow unit on the northeast rim of Tsiolkovsky:

1. Look for a source (fractures or vents).
2. Compare it with:
   a. the dark floor material.
   b. the light floor plains.
   c. the smooth patches on the wall terraces.

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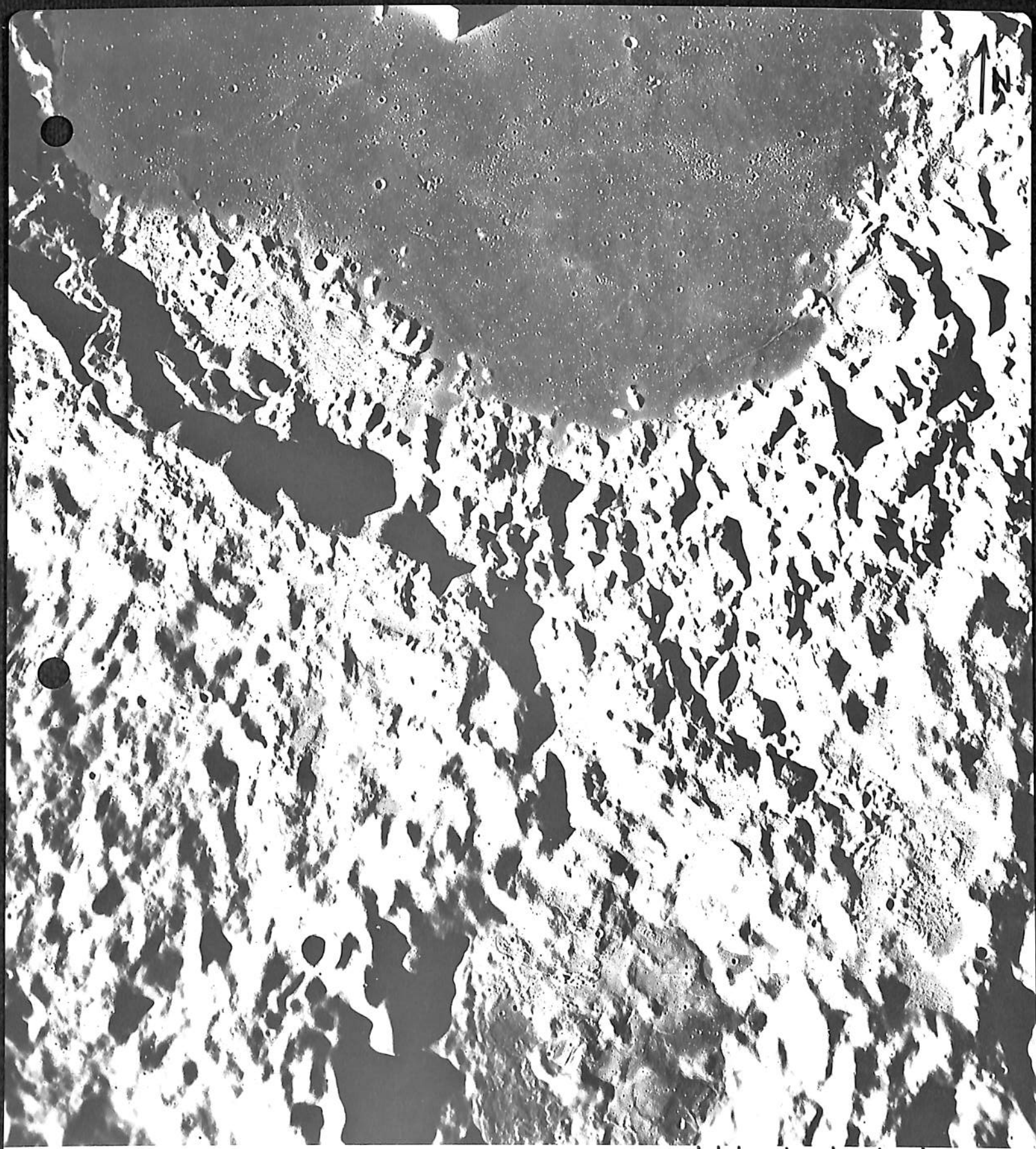

TSIOLKOVSKY (5 of 5)

Study the flow units within the crater Waterman south of Tsiolkovsky:

1. Look for a source (fractures or vents).
2. Compare with:
   a. the dark floor fill of Tsiolkovsky.
   b. the light floor plains of Tsiolkovsky.
   c. patches of plains around Waterman.

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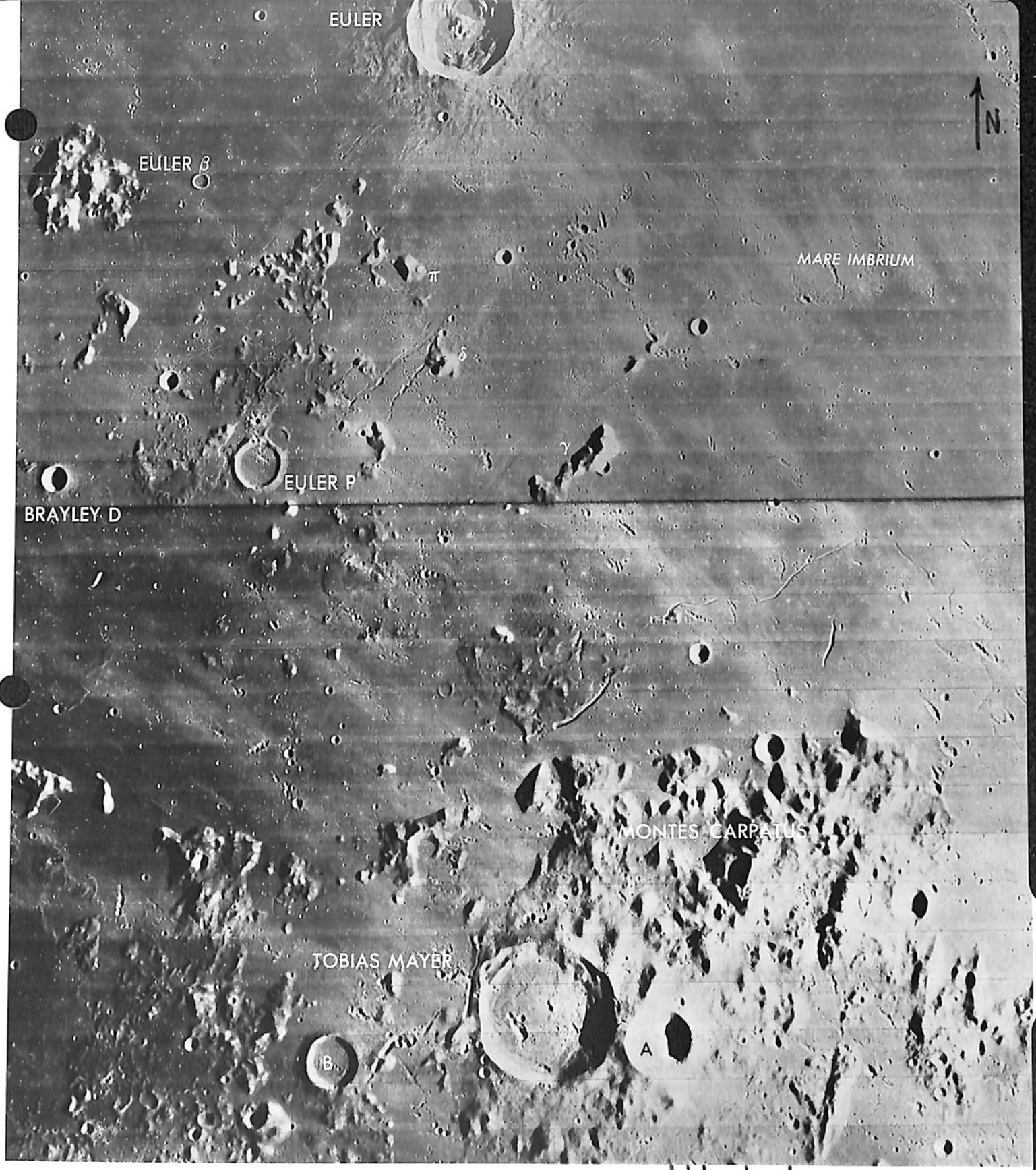

EULER HILLS (1 of 1)

Study the area between the craters Euler and Tobias Mayer with particular attention to the following:

1. Euler hills and domical structures.
2. Shallow craters and crater chains.
3. Sinuous rilles and irregular depression.
4. Color boundaries of mare units.
5. Flow units and probable sources of mare material.

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EULER

KOROLEV (1 of 2)

Use photograph to identify observed features on the early revolutions. (This scene is contiguous with Aitken 1 of 3)

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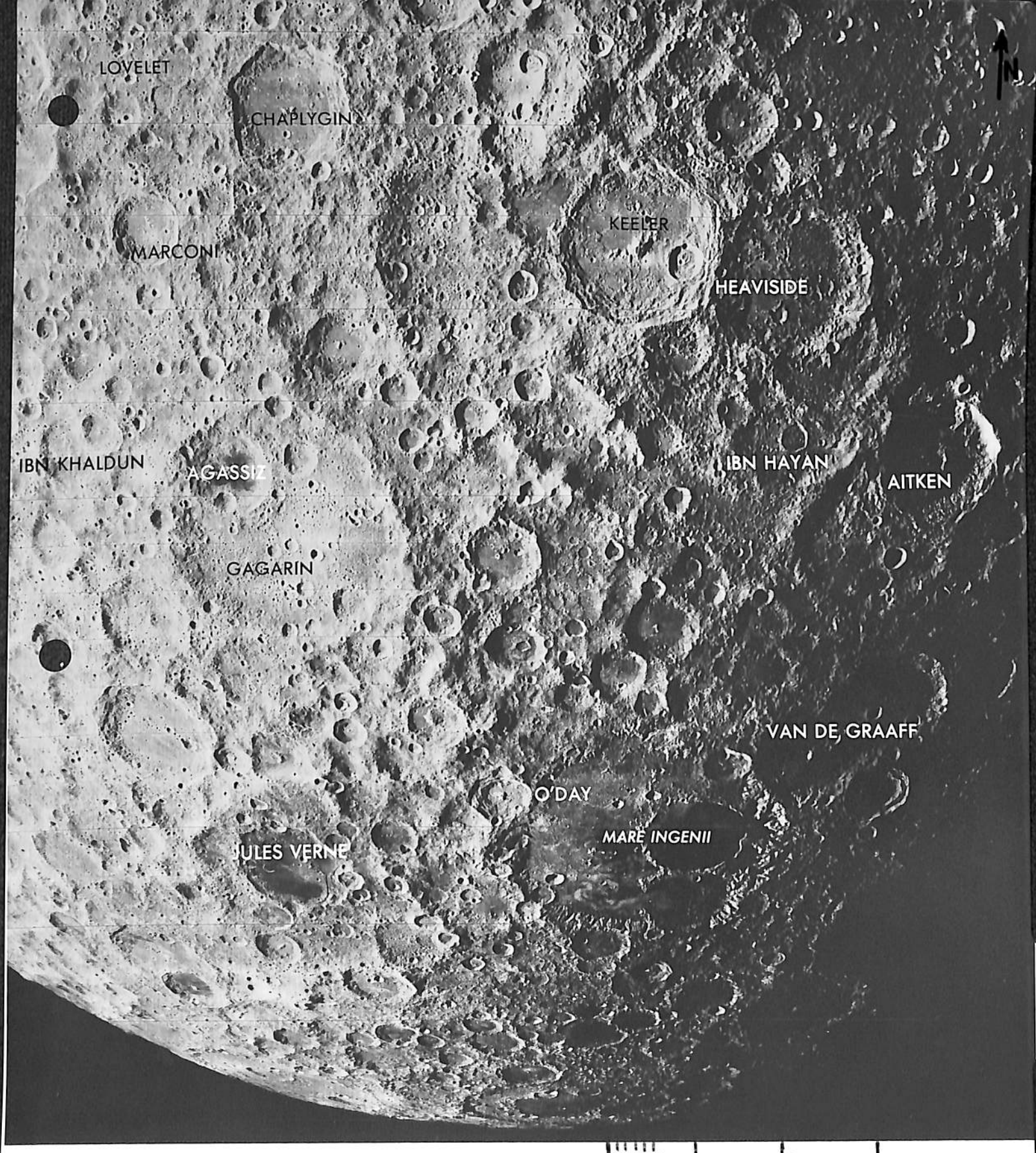

KOROLEV (2 of 2) 0 50 100 200 300 Km = Gagarin

KORO

Use photograph to identify observed features during the early revolutions. (This scene is contiguous with Aitken (1 of 3) to the east and Tsiolkovsky (1 of 5) to the west)

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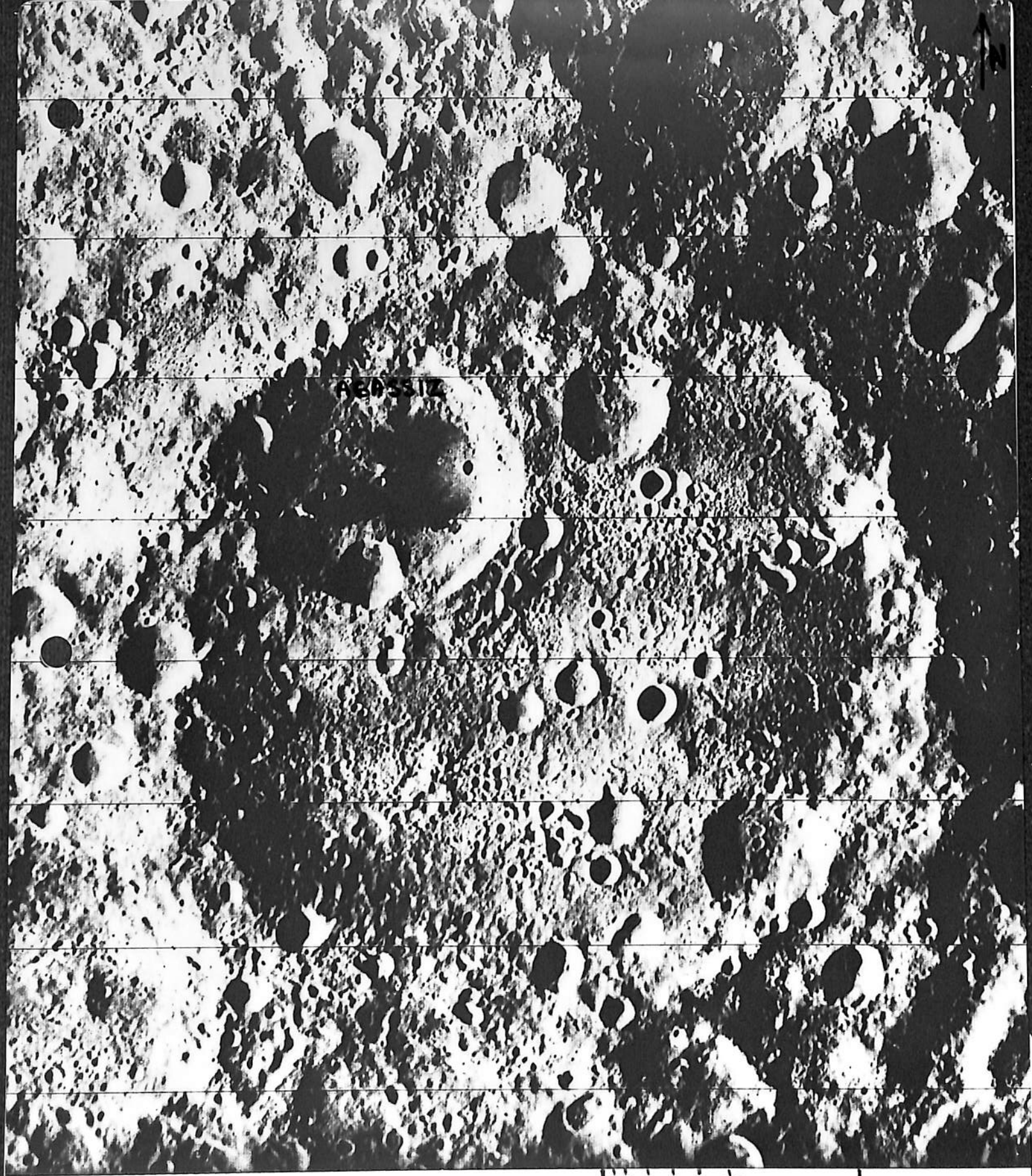

GAGARIN (1 of 3)

Study the characteristics of the light plains in the floor of Gagarin with emphasis on the following:

1. Large scale undulations.
2. Scarps and possible flow boundaries.
3. Crater rims and rimless depressions.
4. Possibility of organization of the rock.

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GAGAR

GAGARIN (2 of 3)

Examine the floor of the crater Agassiz with particular emphasis on the following:

1. The dark floor fill. (Is it mare material or light plains?)
2. Character of the ridge/scarp system in the floor; compare with the similar feature in the Landing Site (3 of 4).
3. Rimless and elongate depressions in the western part of the floor.

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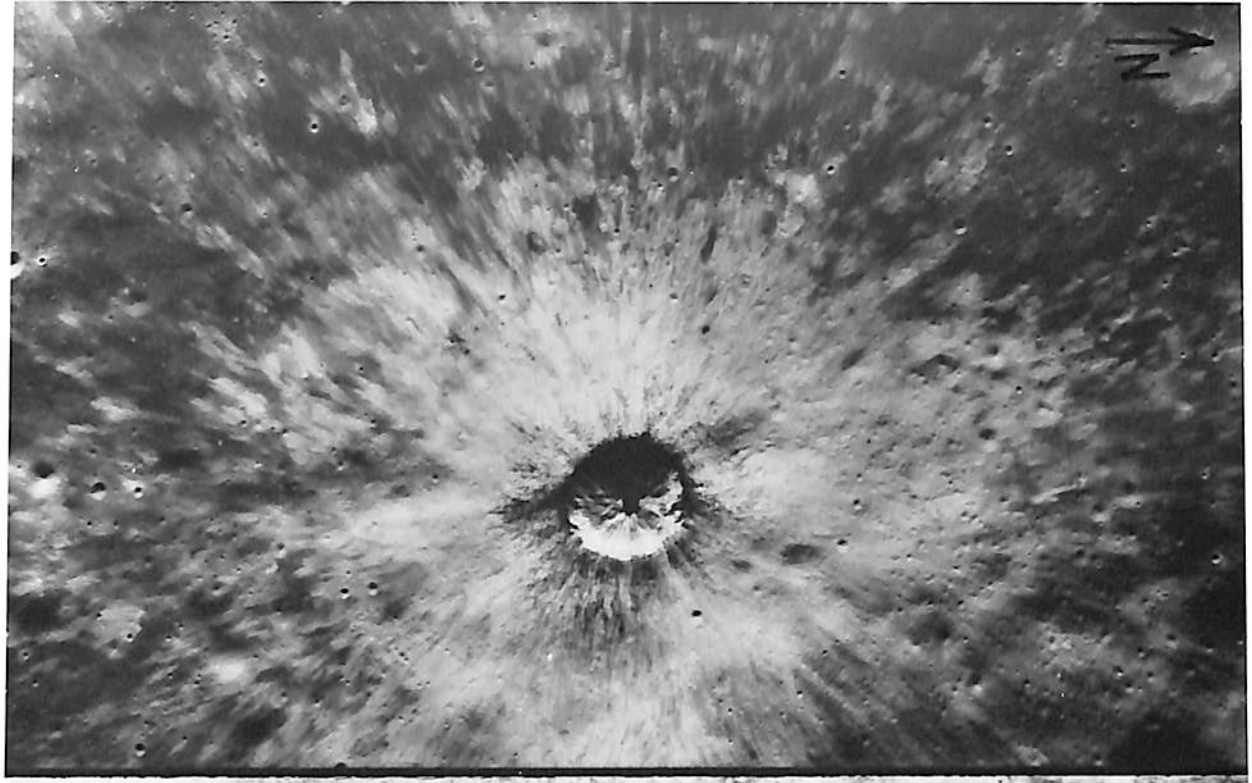
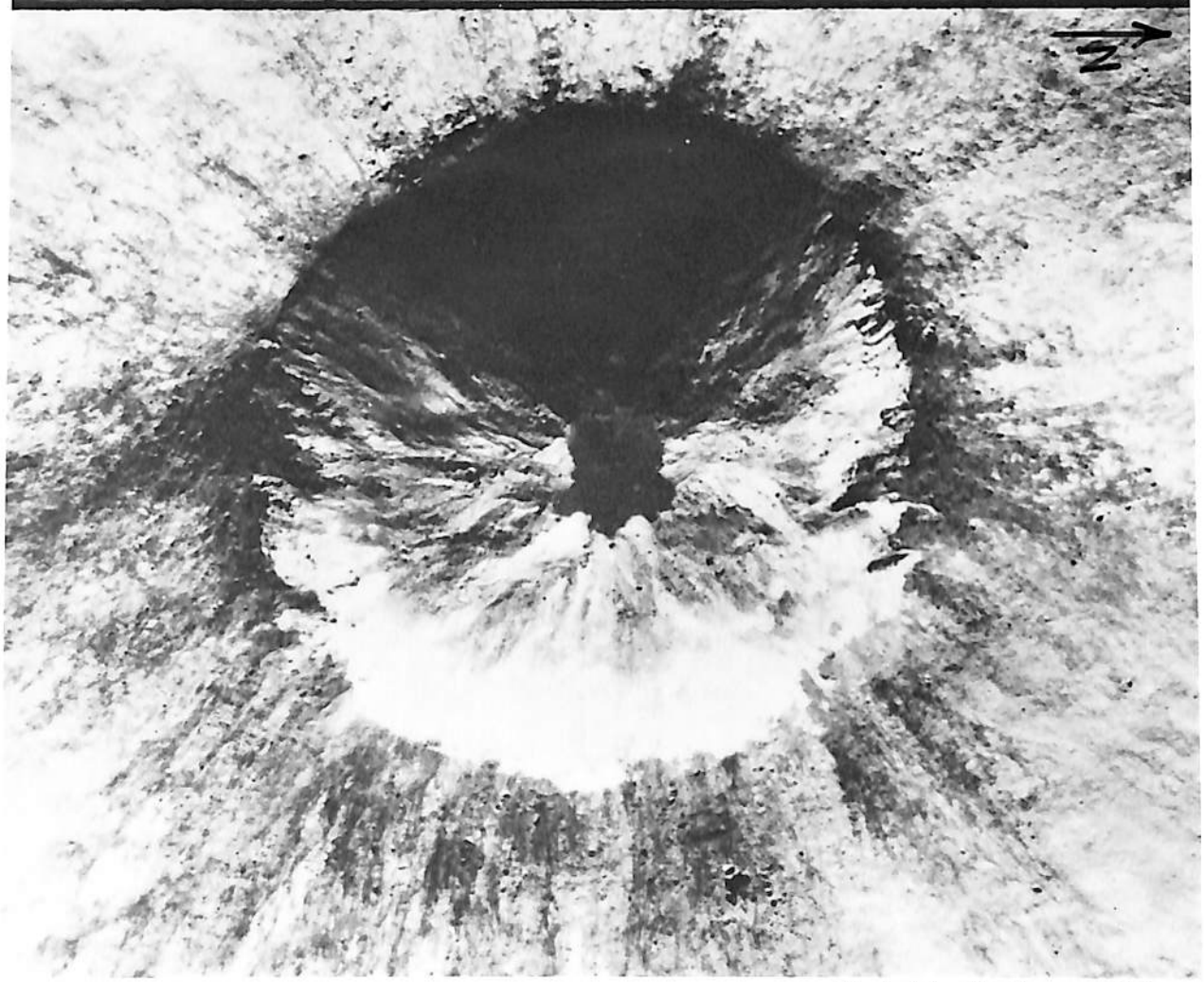


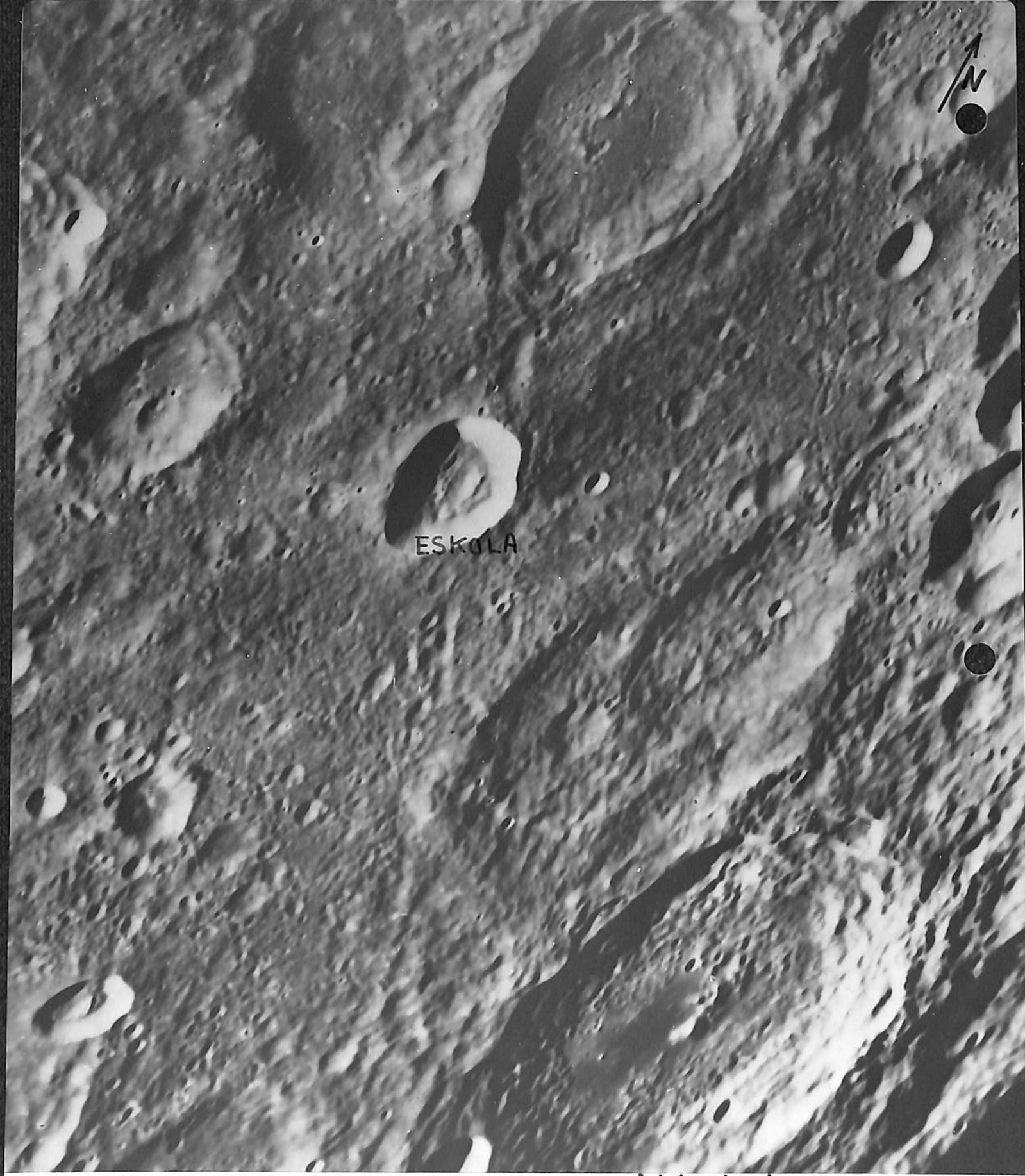


Bright Baby = 5 Km

GAGARIN (3 of 3)

Study the Bright Baby on the western rim of Gagarin to specifically answer the following:

1. Are the dark zones on the rim black rays or are they shadow effects?
2. Is the material in the floor the result of in situ cooling of a melt or is it an unusually level debris?



PASTEUR (1 of 2)

Study the inter-crater plains surrounding the crater Eskola, northeast of Pasteur; compare with the floor fill of Gagarin, Pasteur, and Hilbert.

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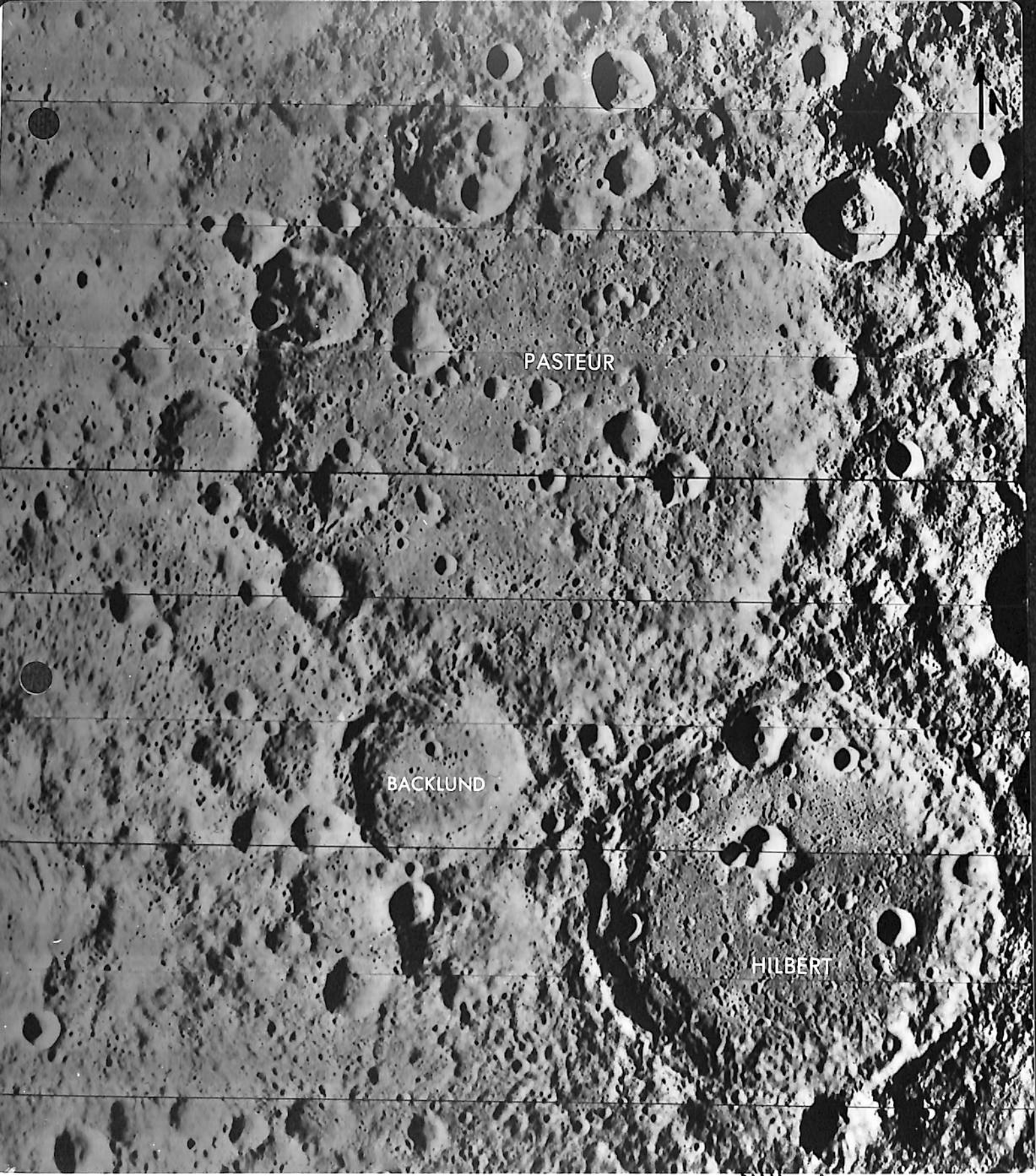

PASTEUR (2 of 2)

Study the floor fill of the craters Pasteur and Hilbert; compare with the floor fill of Gagarin in terms of:

1. Large scale undulations.
2. Scarps and possible flow boundaries.
3. Crater rims and rimless depressions.
4. Possibility of organization of the rock.

PAST

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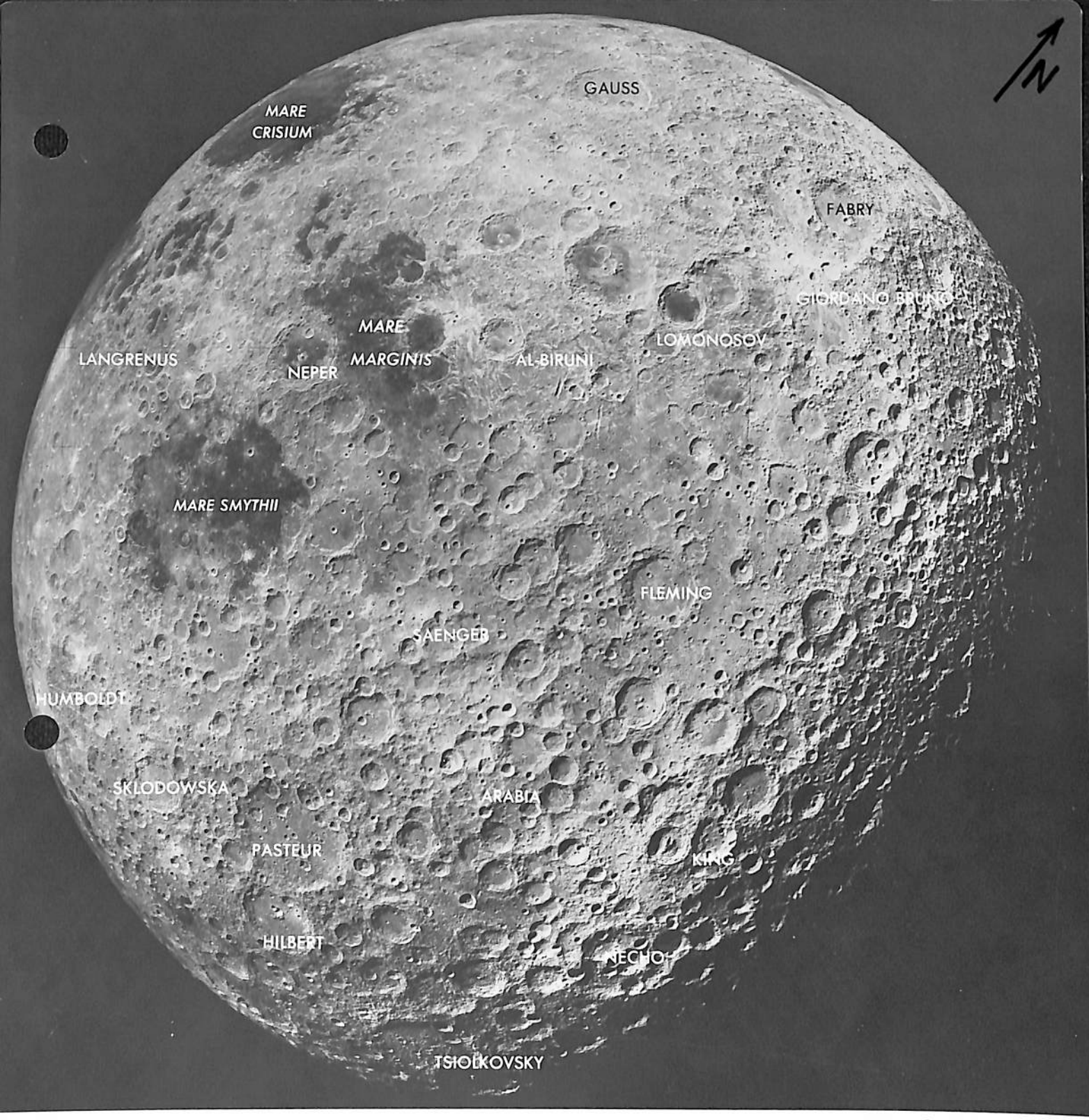

POST-TEI VIEW (1 of 2)

Use photograph to identify features early during the post-TEI television transmission.

Al-Biruni = 90 Km
Fleming = 120 Km
King = 75 Km
Necho = 200 Km
Neper = 150 Km
Pasteur = 250 Km

POST-TEI VIEW (2 of 2)

Use photograph to identify features late during the post-TEI television transmission.

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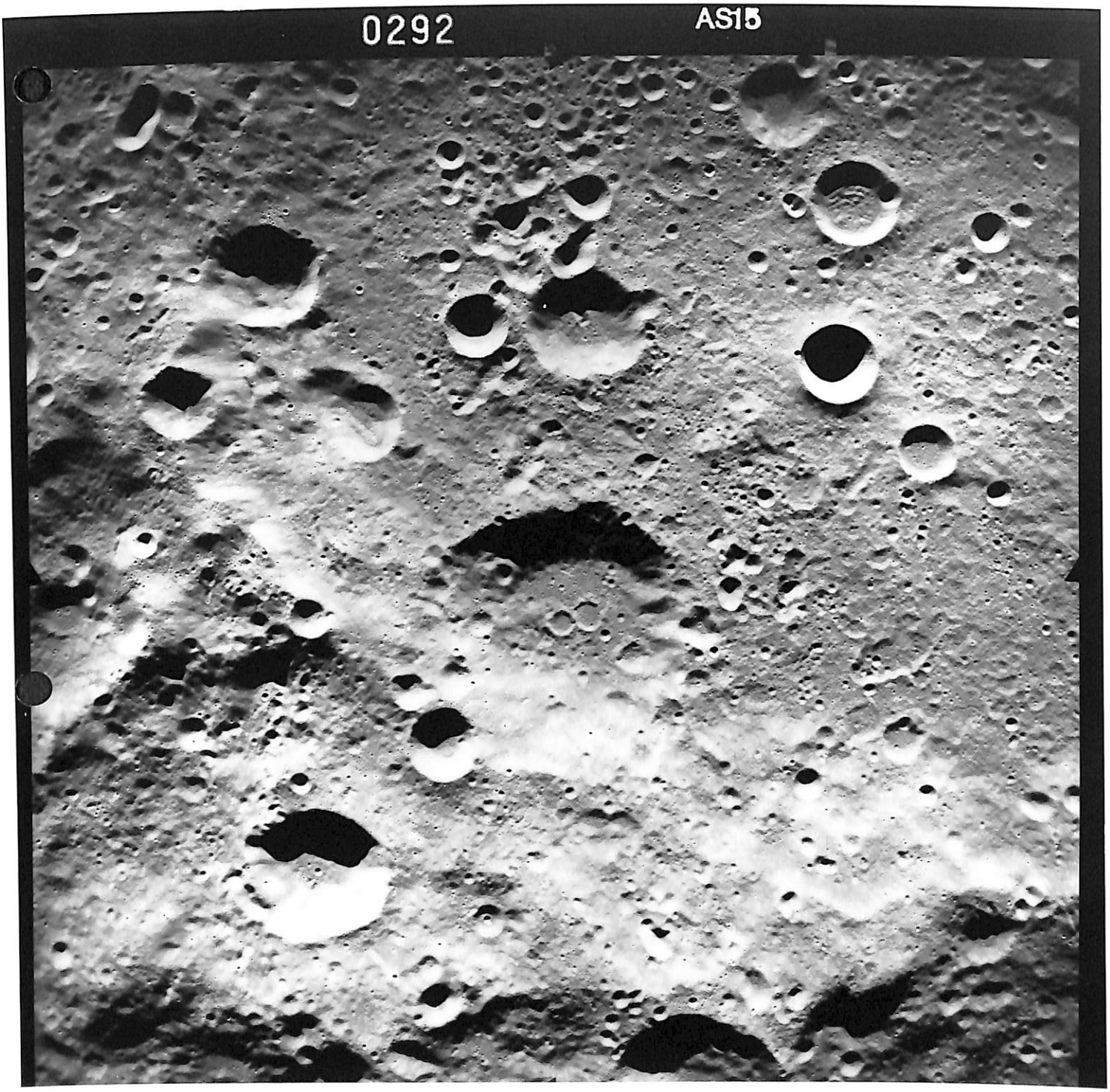
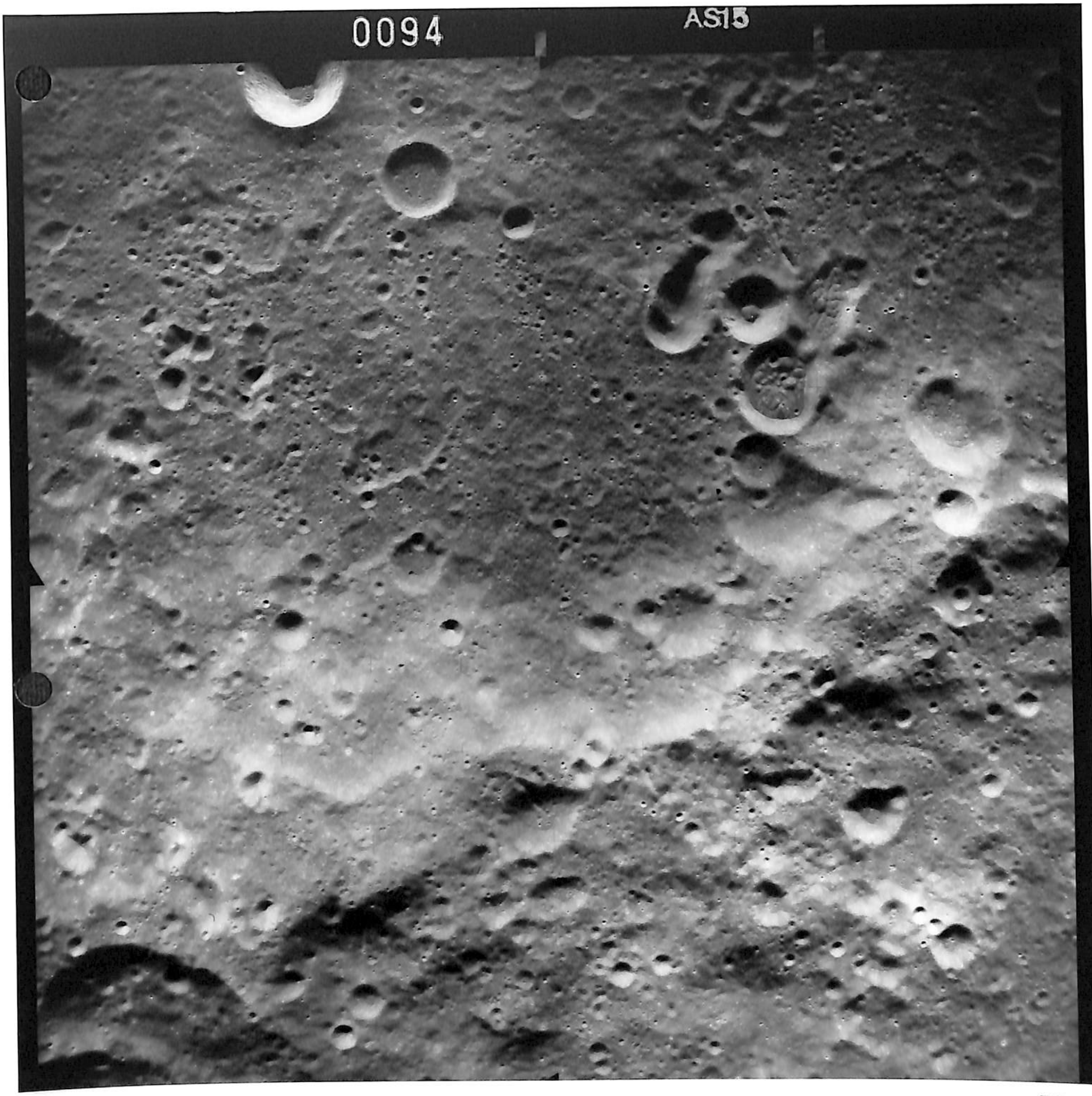
ADDITIONAL VISUALS - Far Side Terminator to Near Side Terminator

- CROOKS - Relative age; ejecta lobes N. & S.
- AITKEN - Scarp and furrowed terrain one crater diameter to NE.
- AITKEN, KEELER, TSIOLKOVSKY - Compare and contrast ejecta blankets of similar sized young craters
- "THE BRIGHT ONE" - Look for gravity flow lobes and channels on slopes.
- Near GODDARD - More swirls, small crater N. of Goddard possible source.
- Between HUBBLE and GODDARD - Cluster of sharp hills. Possible highland volcanics. Look at albedo and landform shapes.
- → NEPER - Central peak - look for dome of layered units.
- LANDING SITE -
  - Textural and color differences between massifs and sculptured hills.
  - Stratigraphic relationship and type of contact between massifs and sculptured hills.
  - Dark Mantle - Is it patchy?; vents present?; does it overlie slide?
  - Slide - Is a scar present?
  - Streaks on south massifs above slide - what is their extent?; do they go over top?
- DAWES - Thermal anomaly - anything different.
- DARK MANTLE, DARK HALO OF SERENITATUS, MARE: -
  - Are age relationships present?
  - Are scarps, flows, vents, fissures present?
  - Compare 3 regions: LANDING SITE, TACQUET, SULPICIUS GALLUS
- → CONON RILLE - Crater at source of rille.
- BOODE RILLE - Is this a series of vents?
- → Compare 5 young craters - All pierce Copernicus ray pattern
  - 4 dark: 2 south of WALLACE; DRAPER; DRAPER C. - 1 light: PYTHEAS
- → ARISTARCHUS - Transient events.
- MARE REGIONS -
  - Flow structure (sources, scarps, vents, fissures)
  - Wrinkel Ridges - Associated flows, cracks, and rilles.
    - Age of ridge vs. mare.
    - Texture vs. mare.



N
GAGARIN



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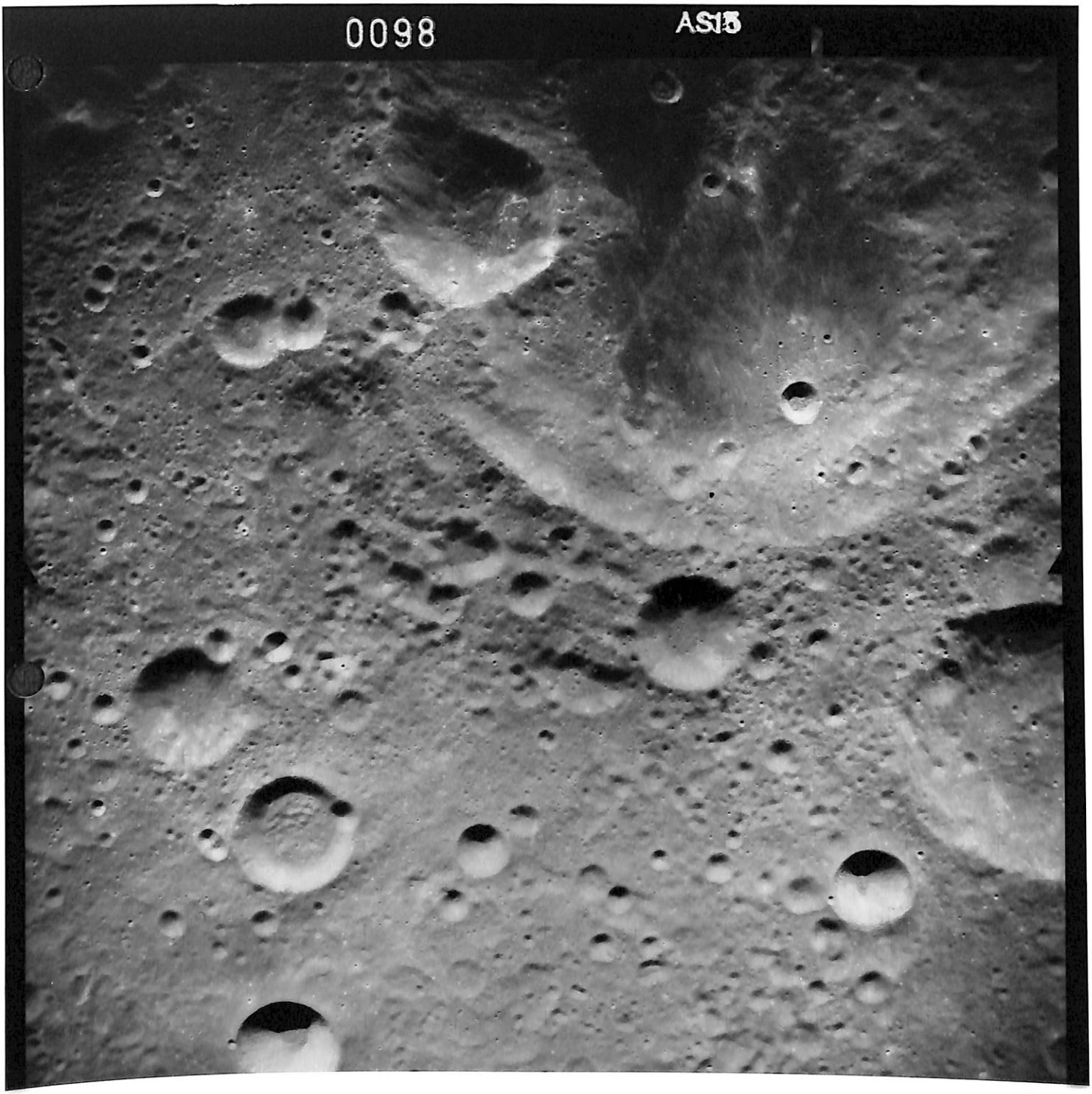
GAGARIN



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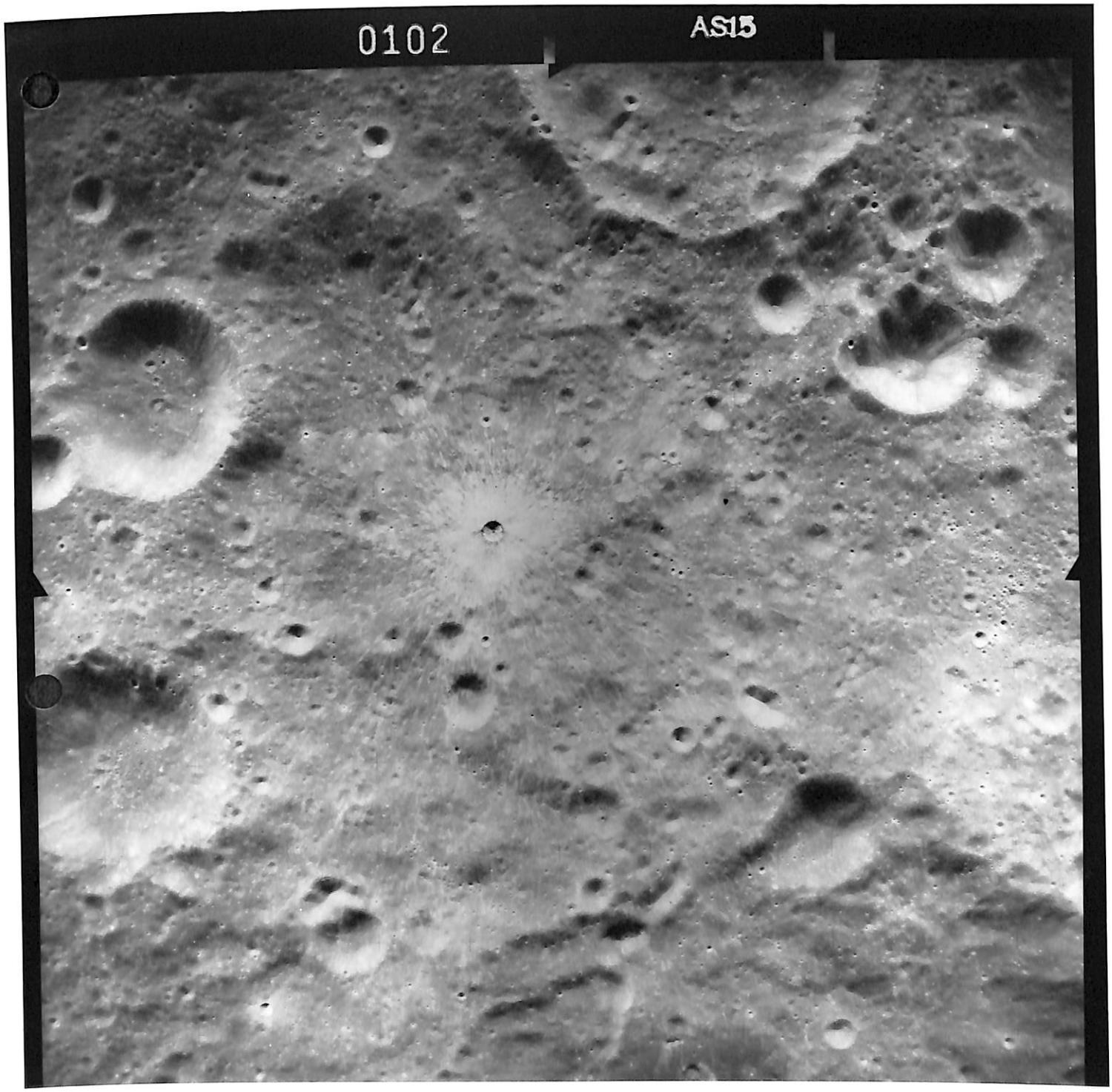

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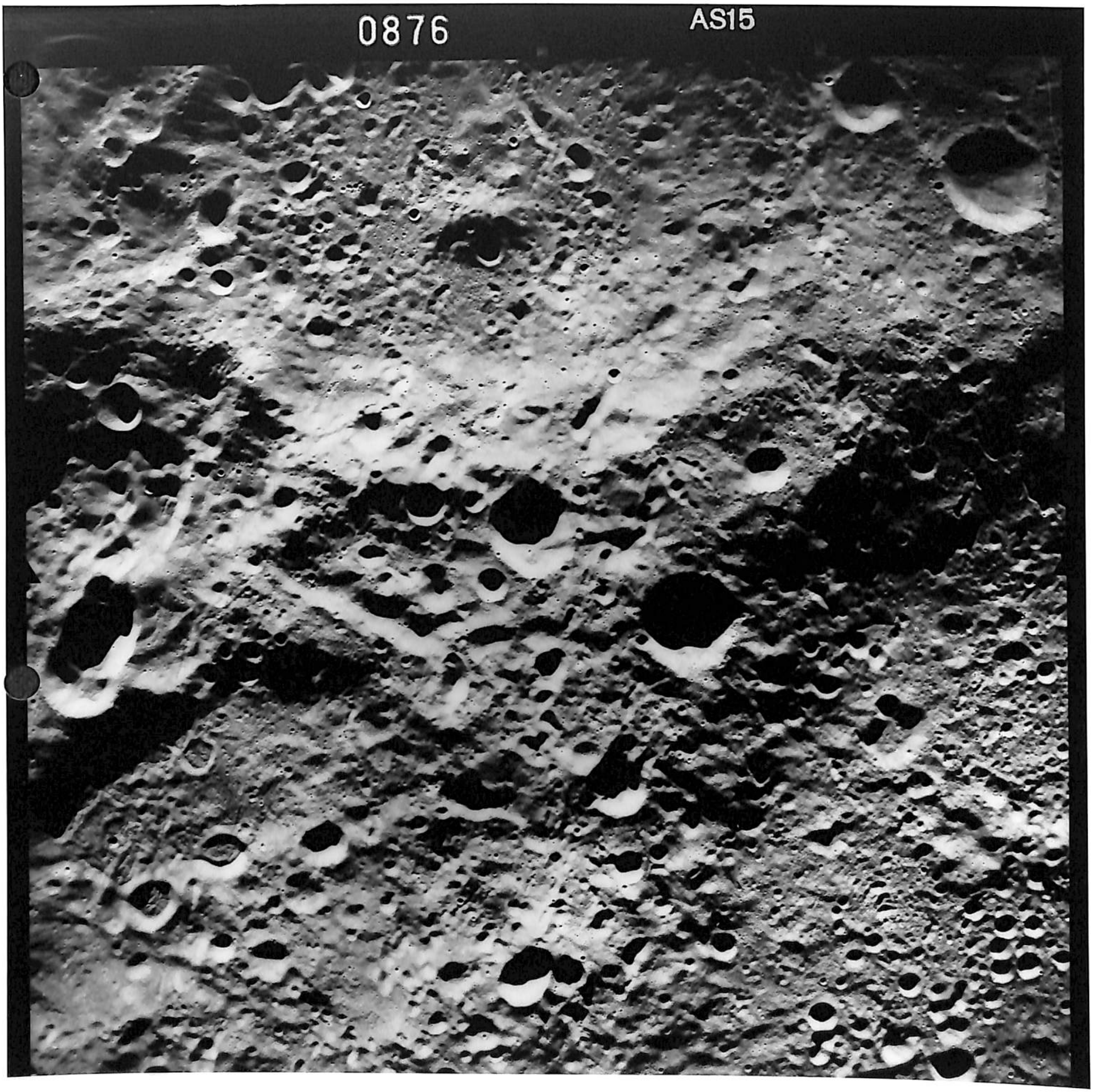

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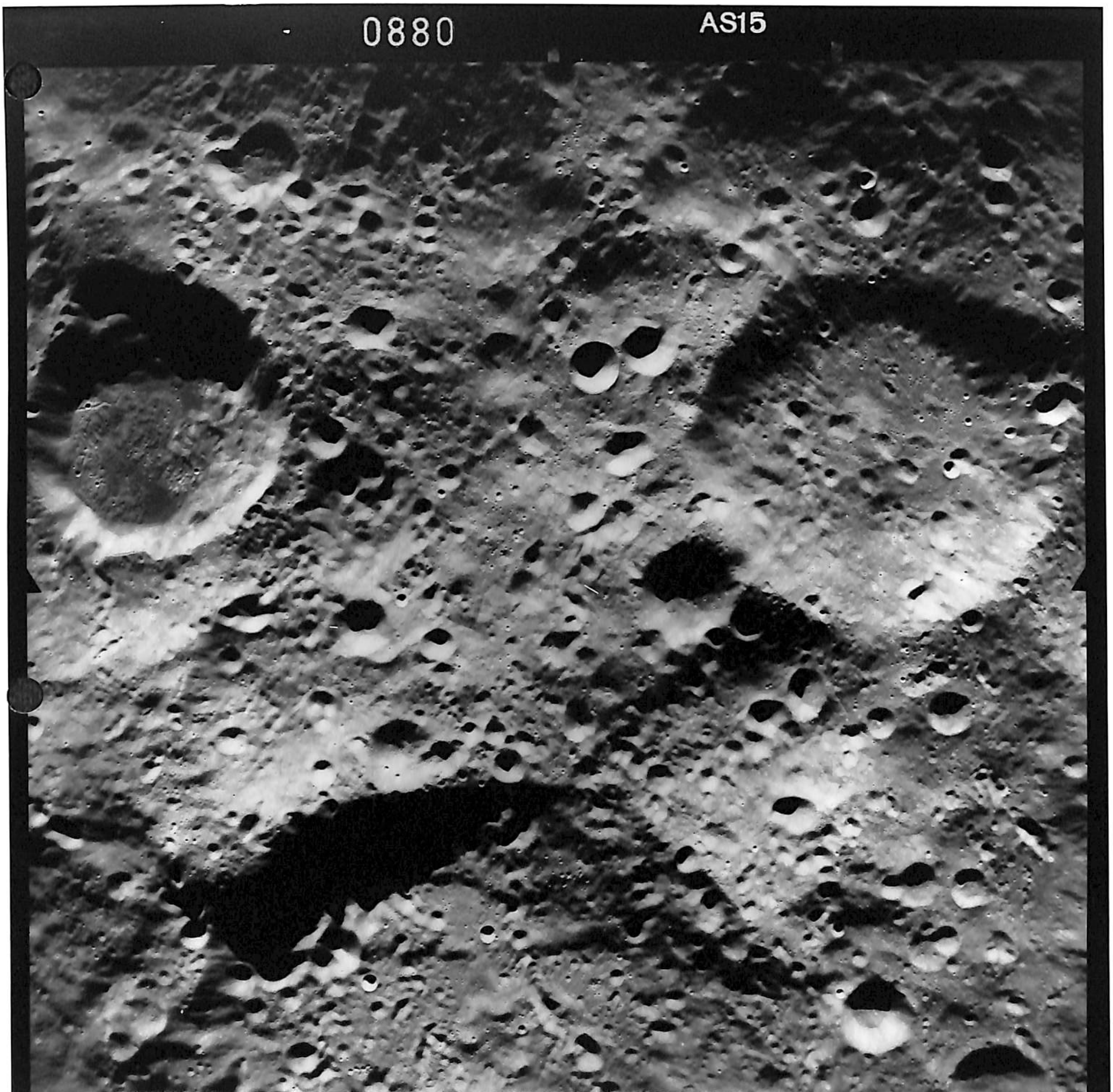
TSIOLKOVSKY



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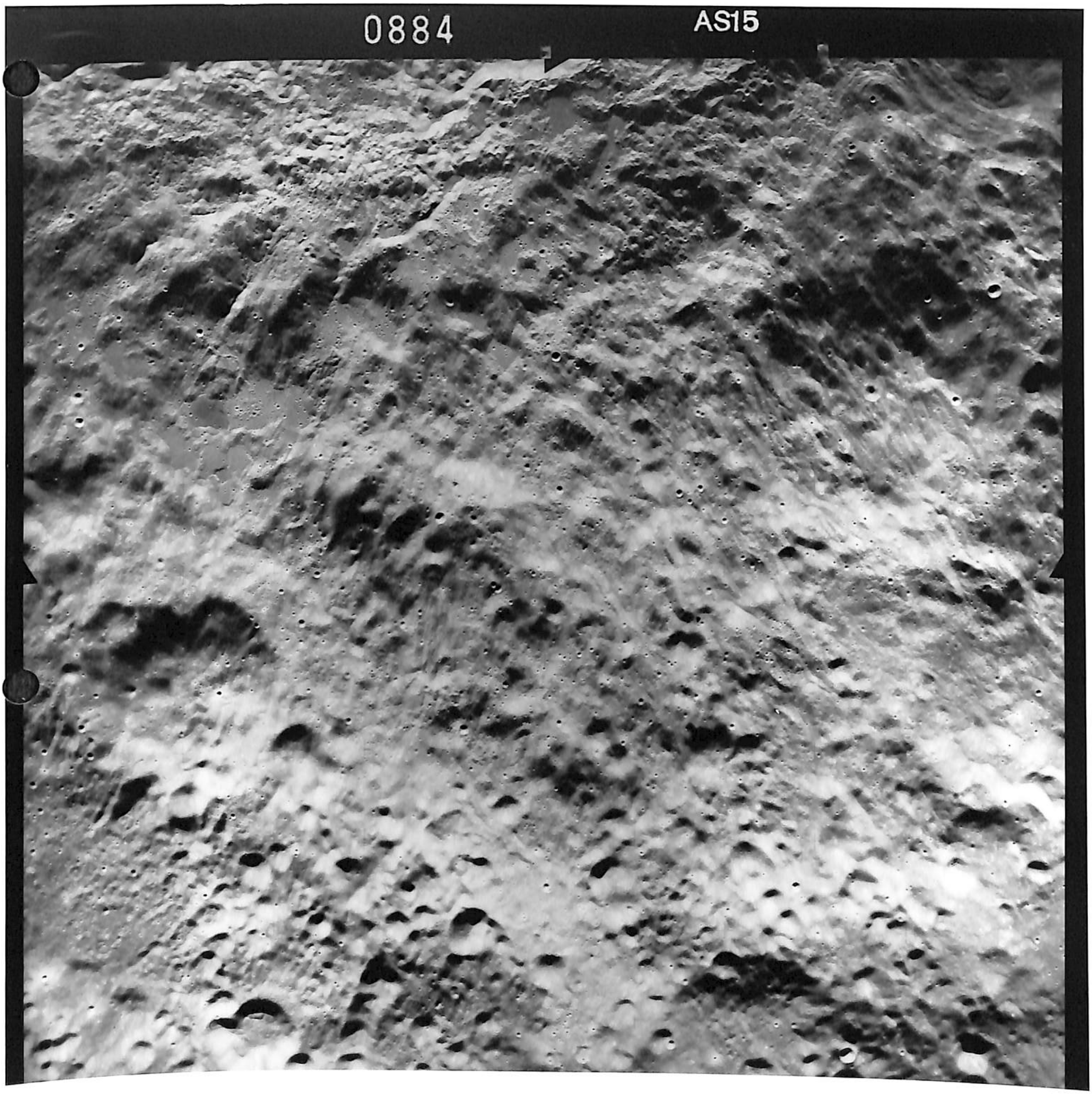

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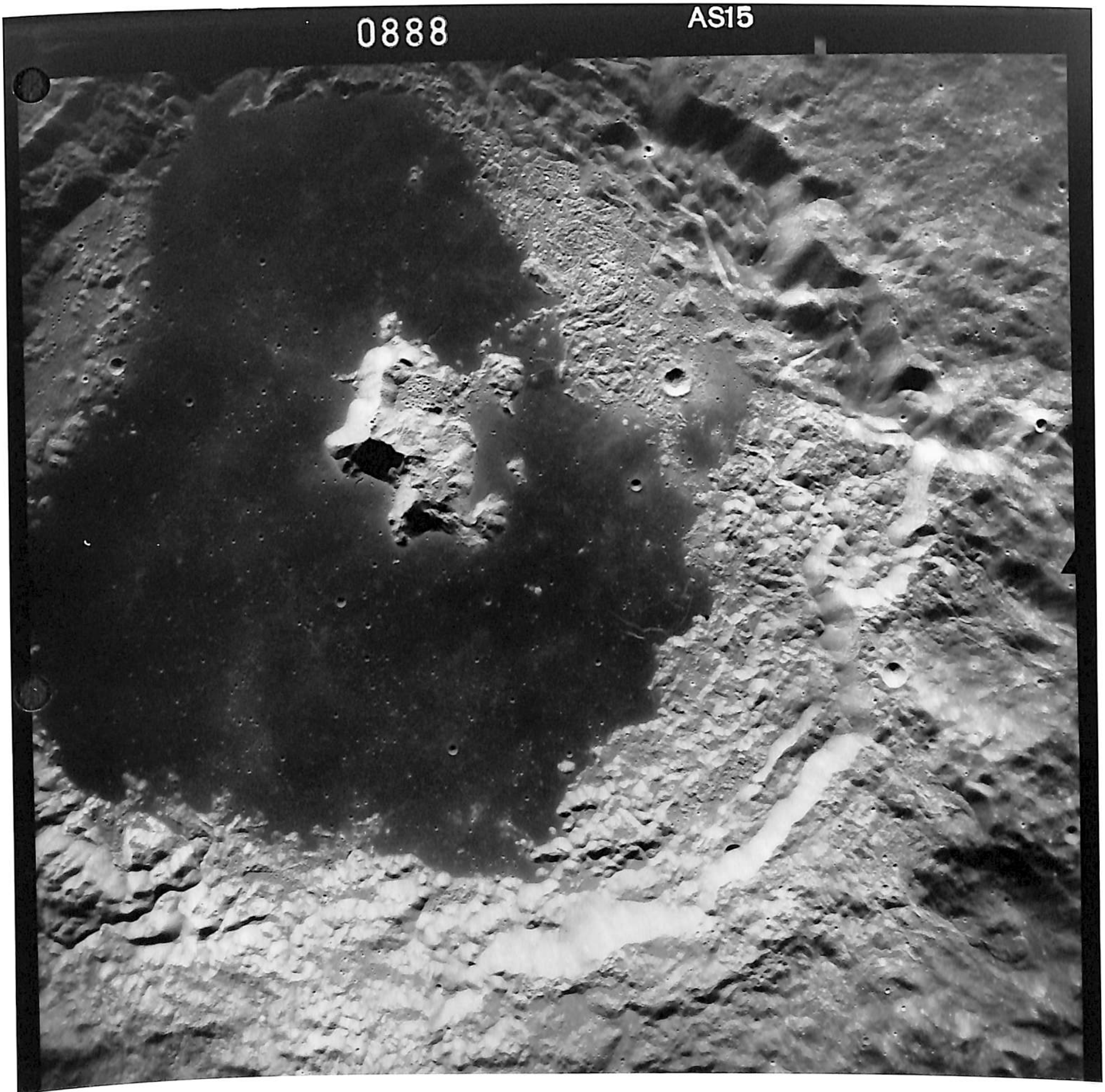

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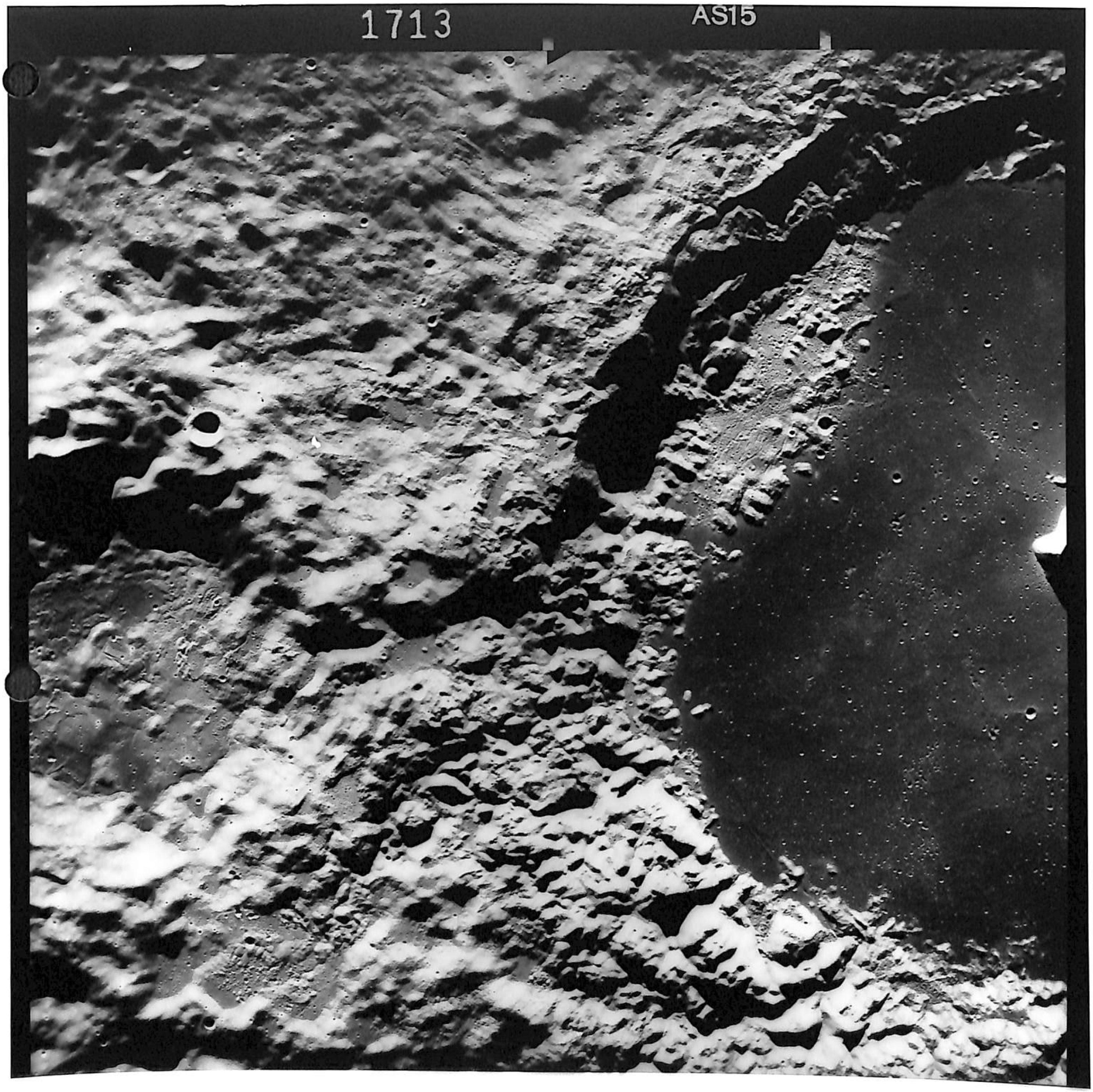

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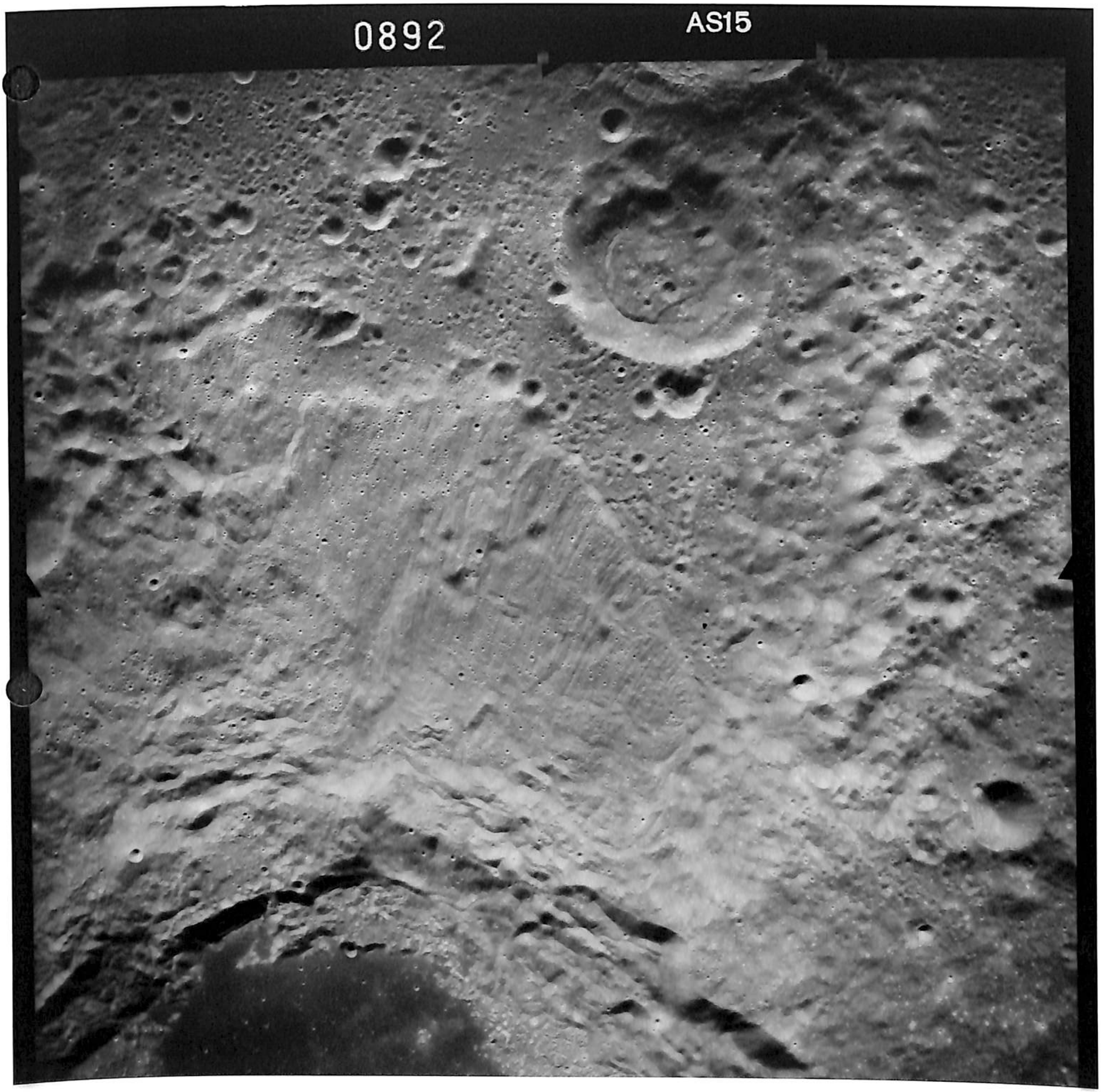

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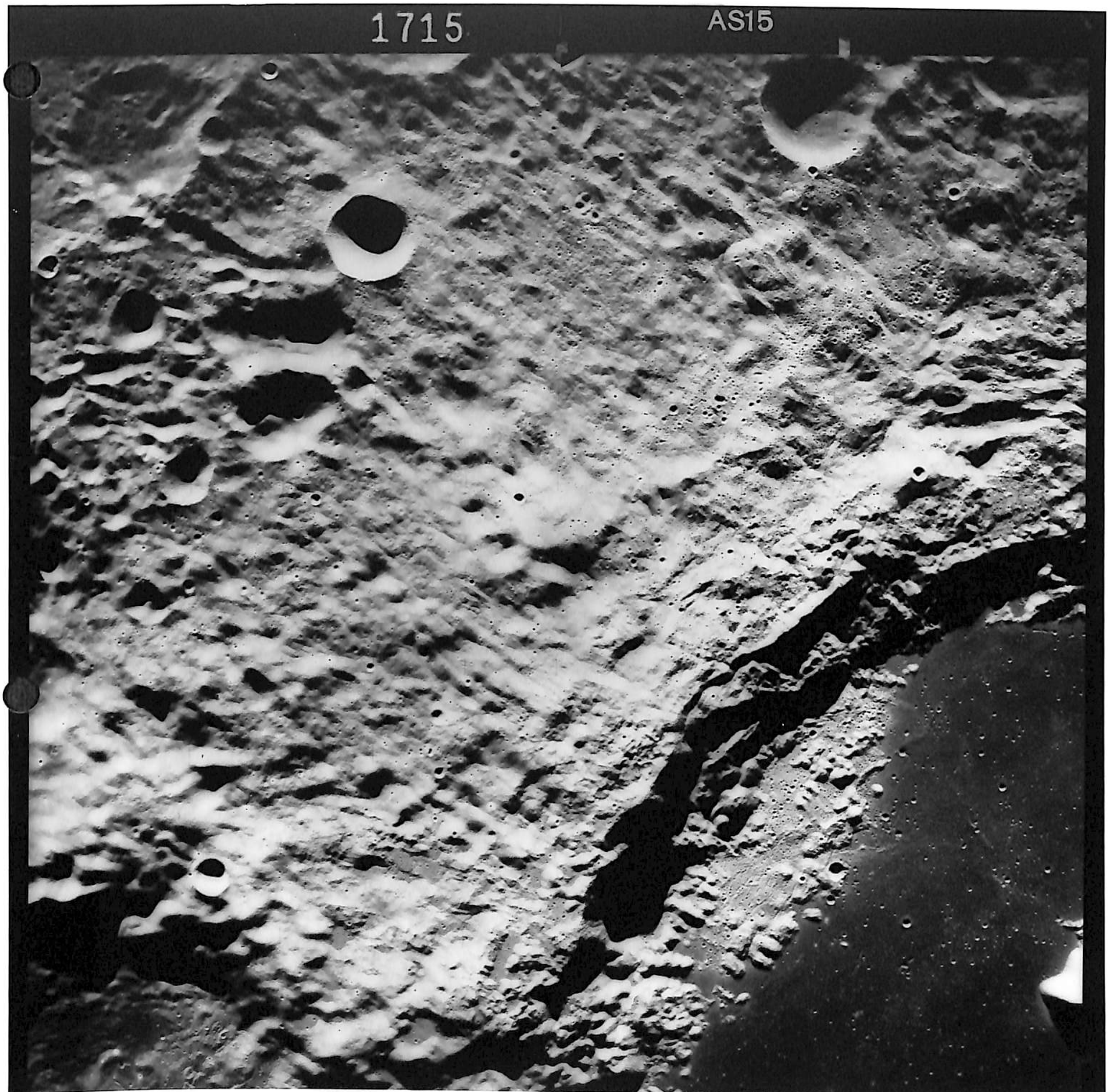
TSIOLKOVSKY



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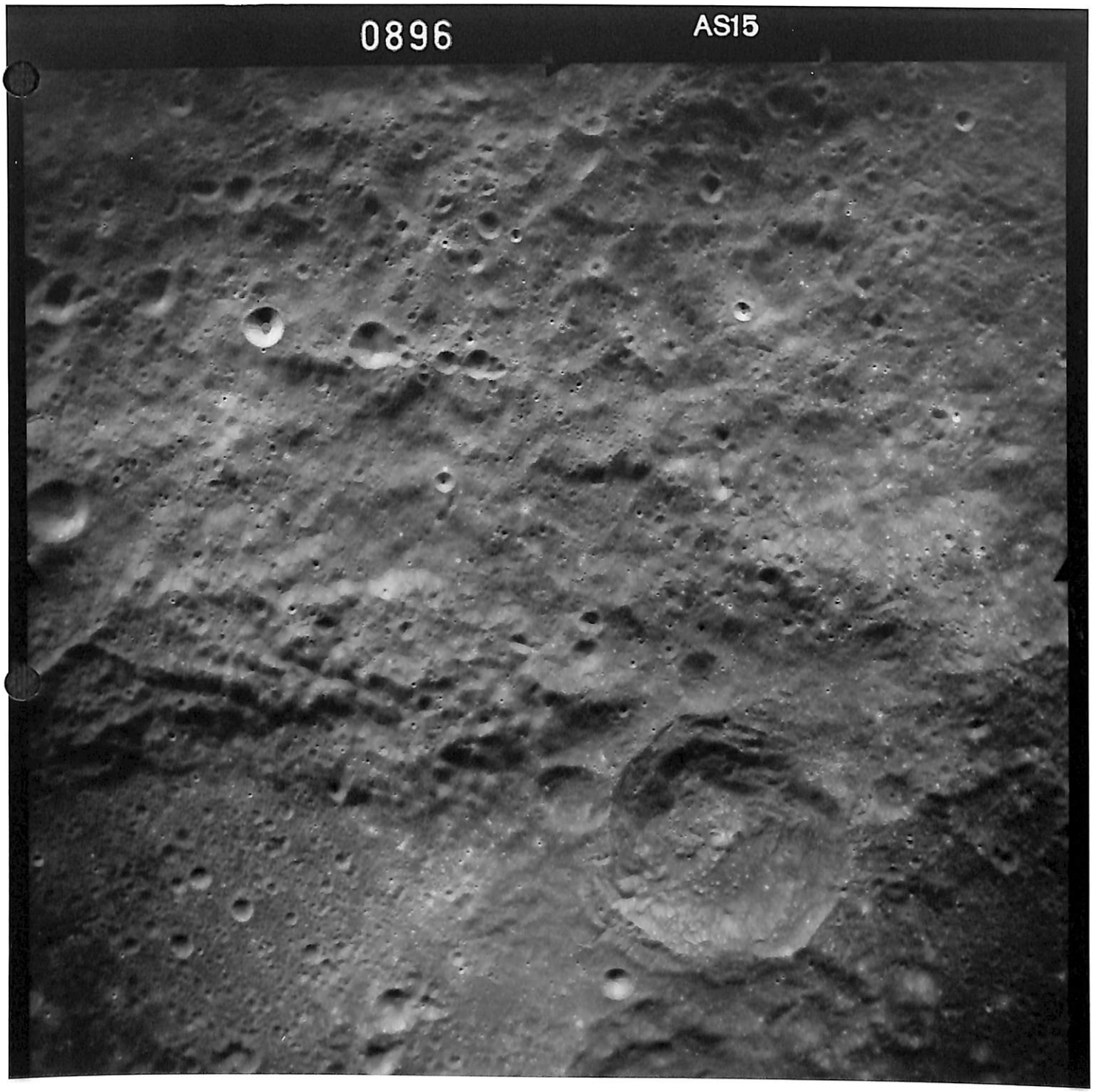
TSIOLKOVSKY



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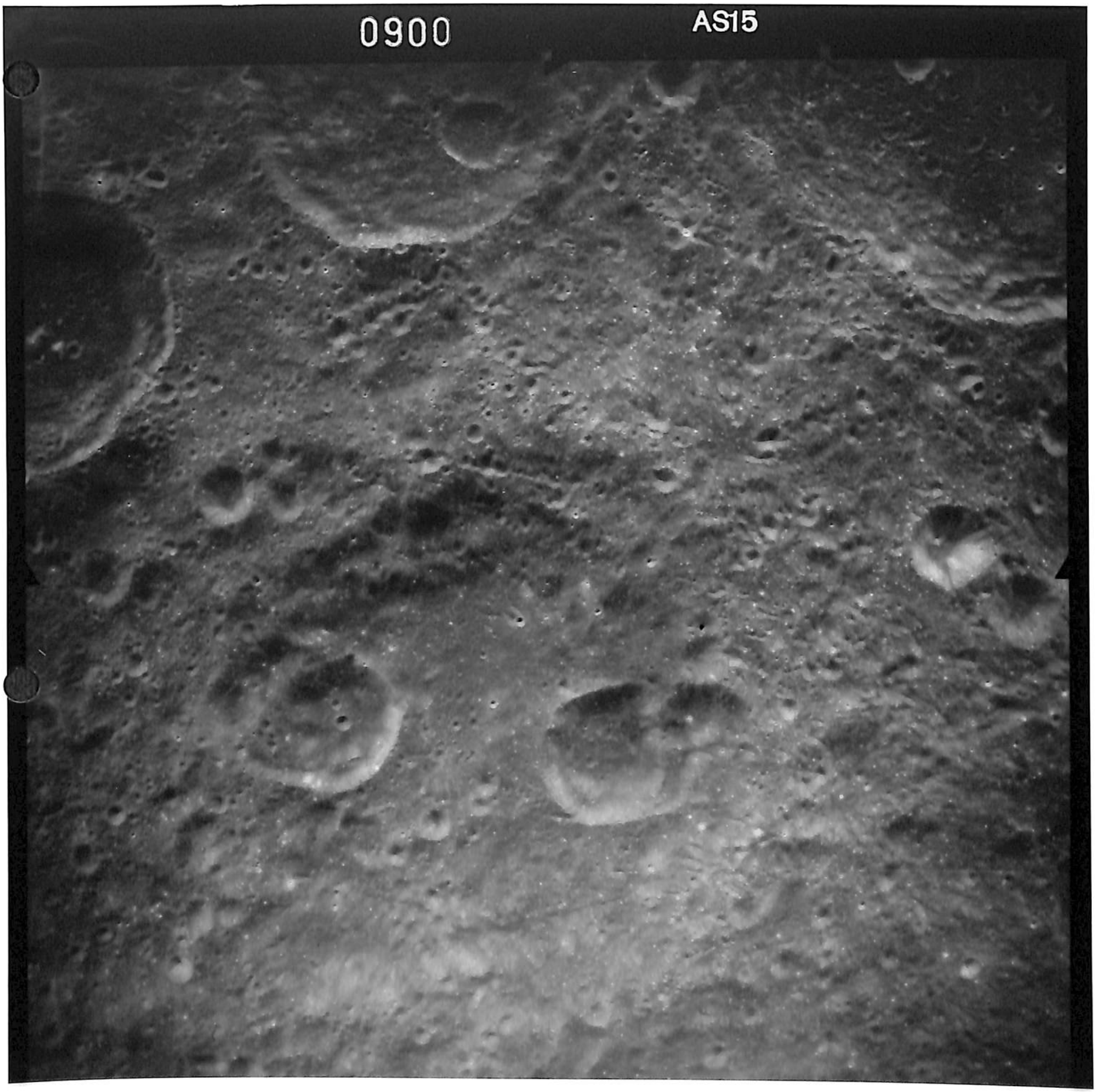
TSIOLKOVSKY



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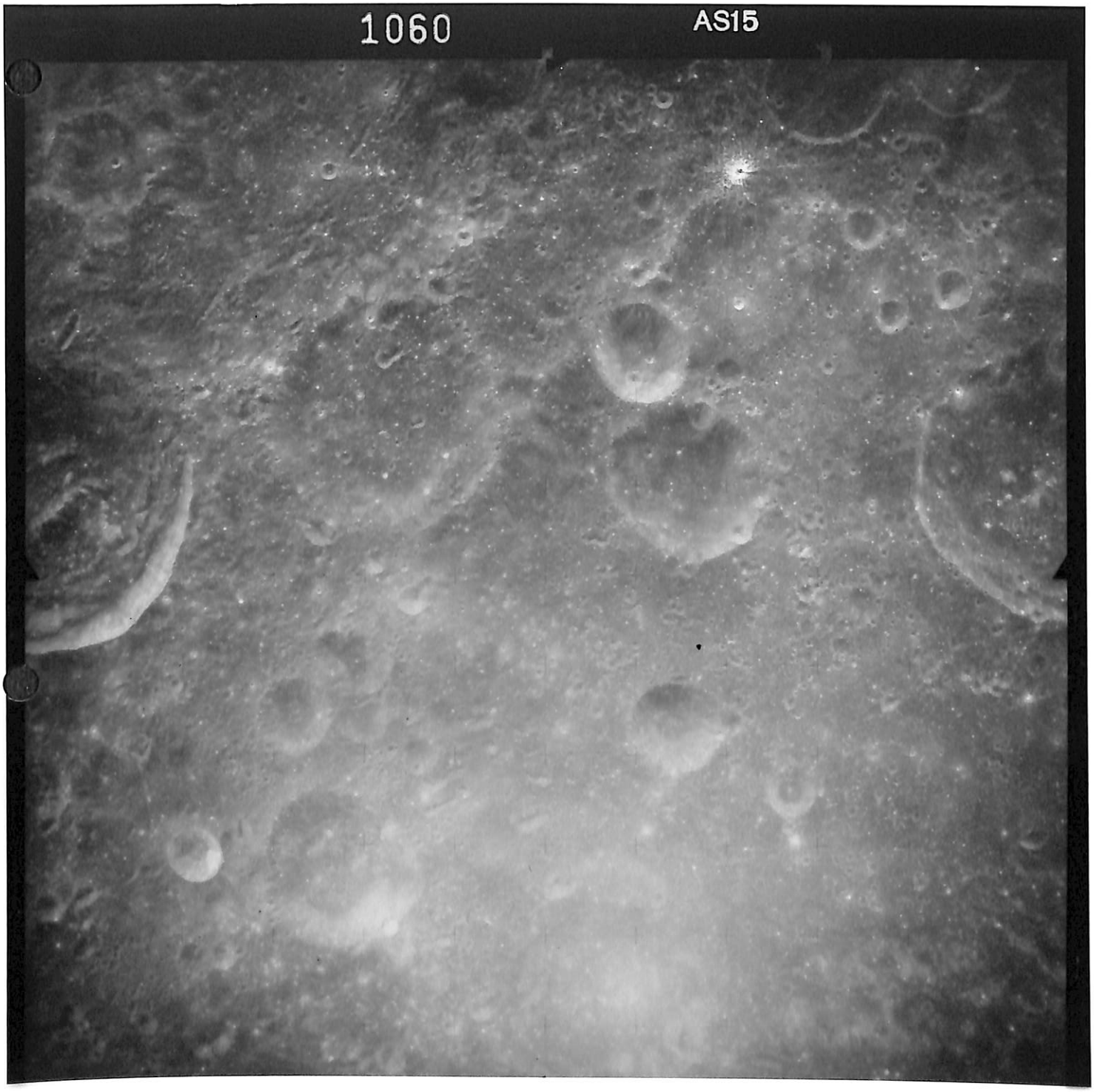
TSIOLKOVSKY TO PASTEUR



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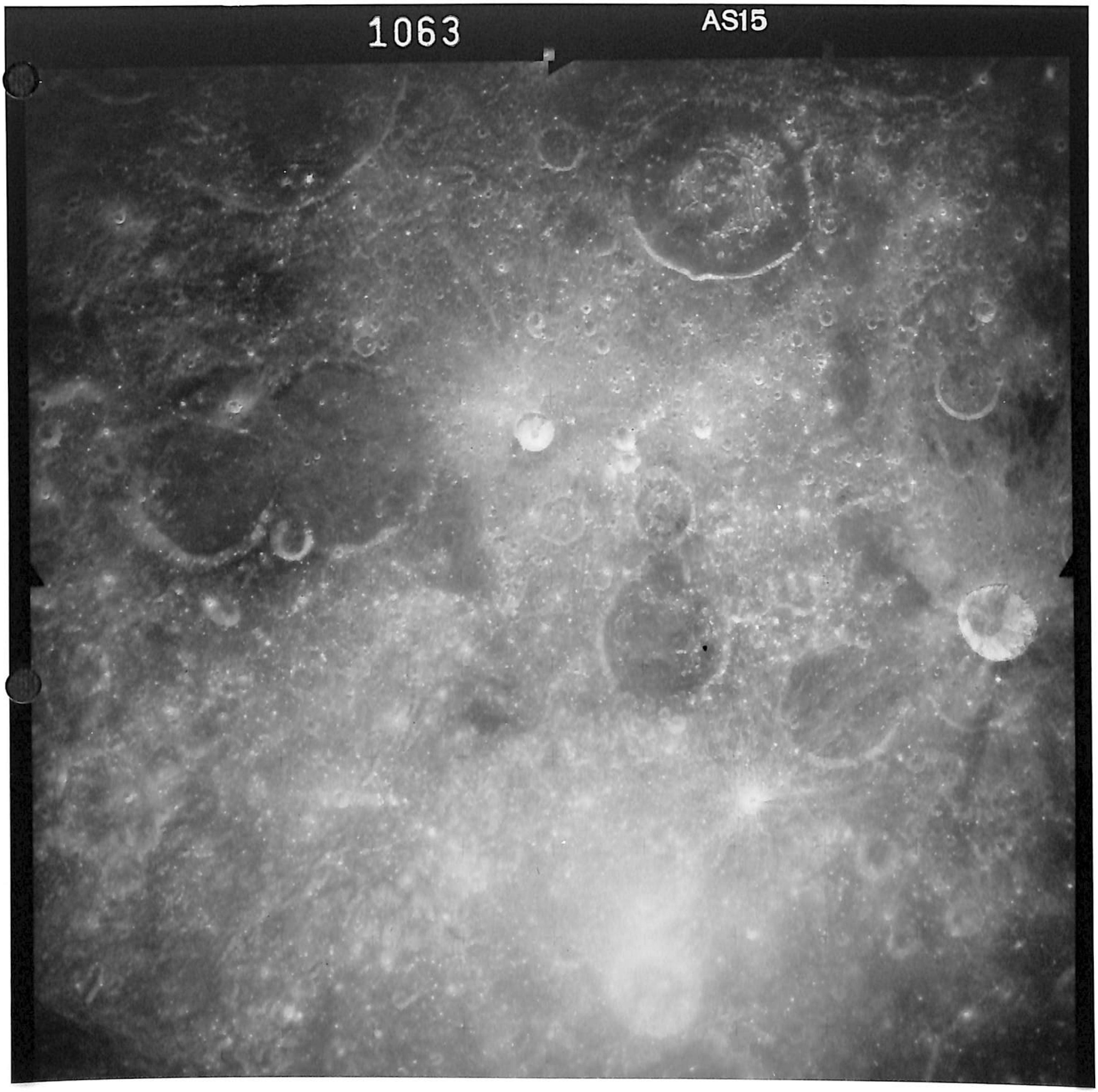
HIRAYAMA/SMYTHI



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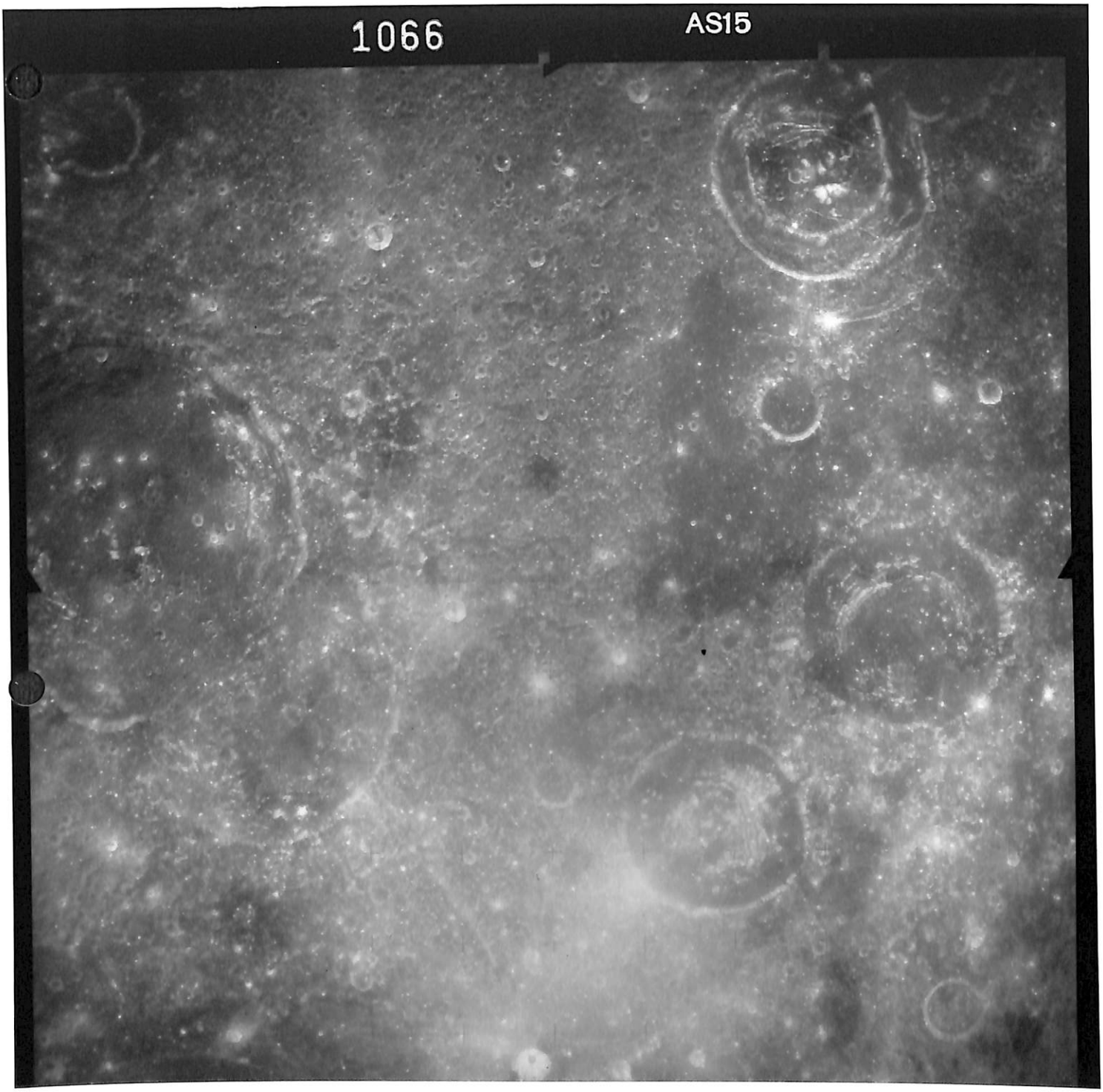
SMYTH II



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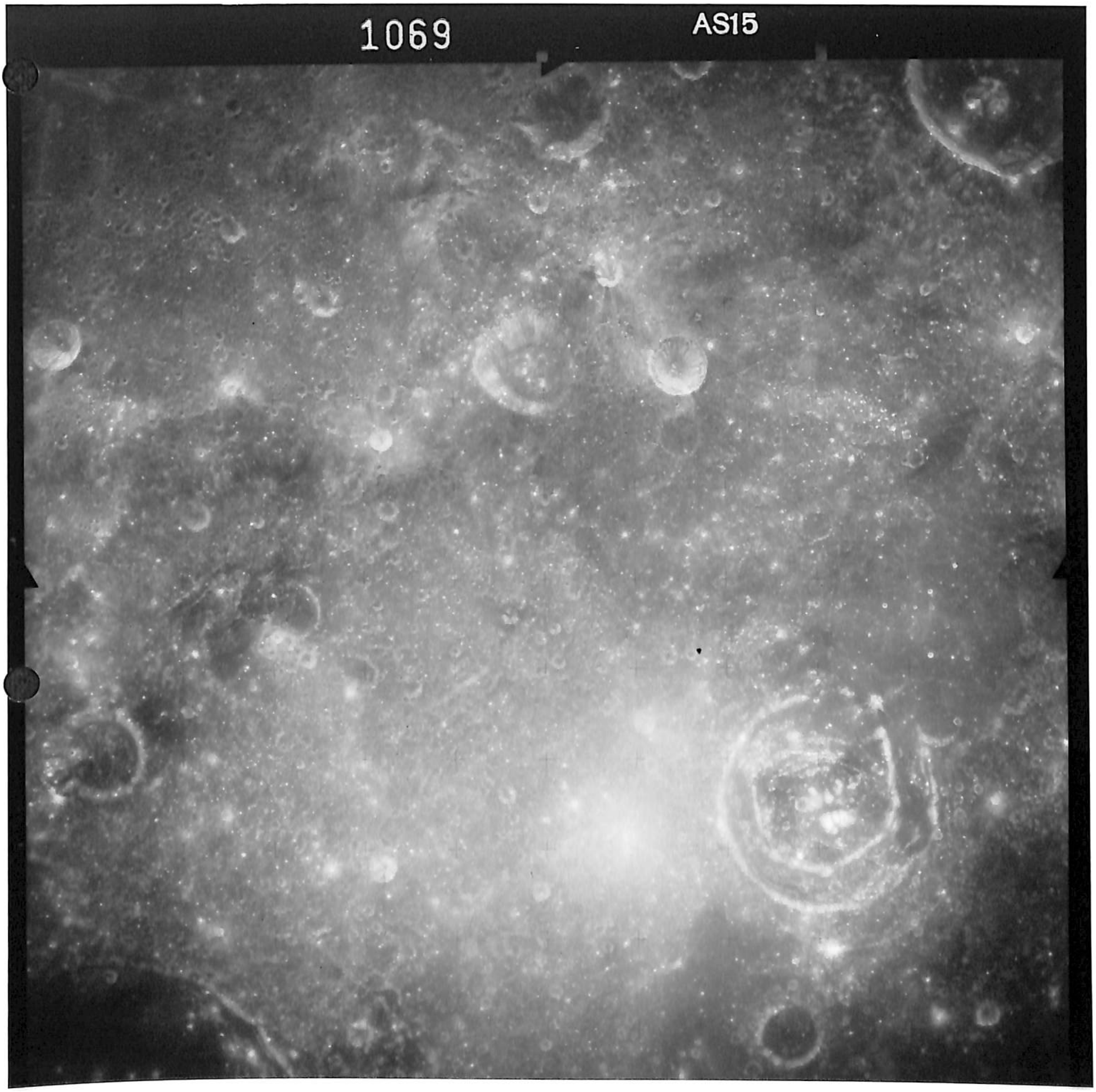
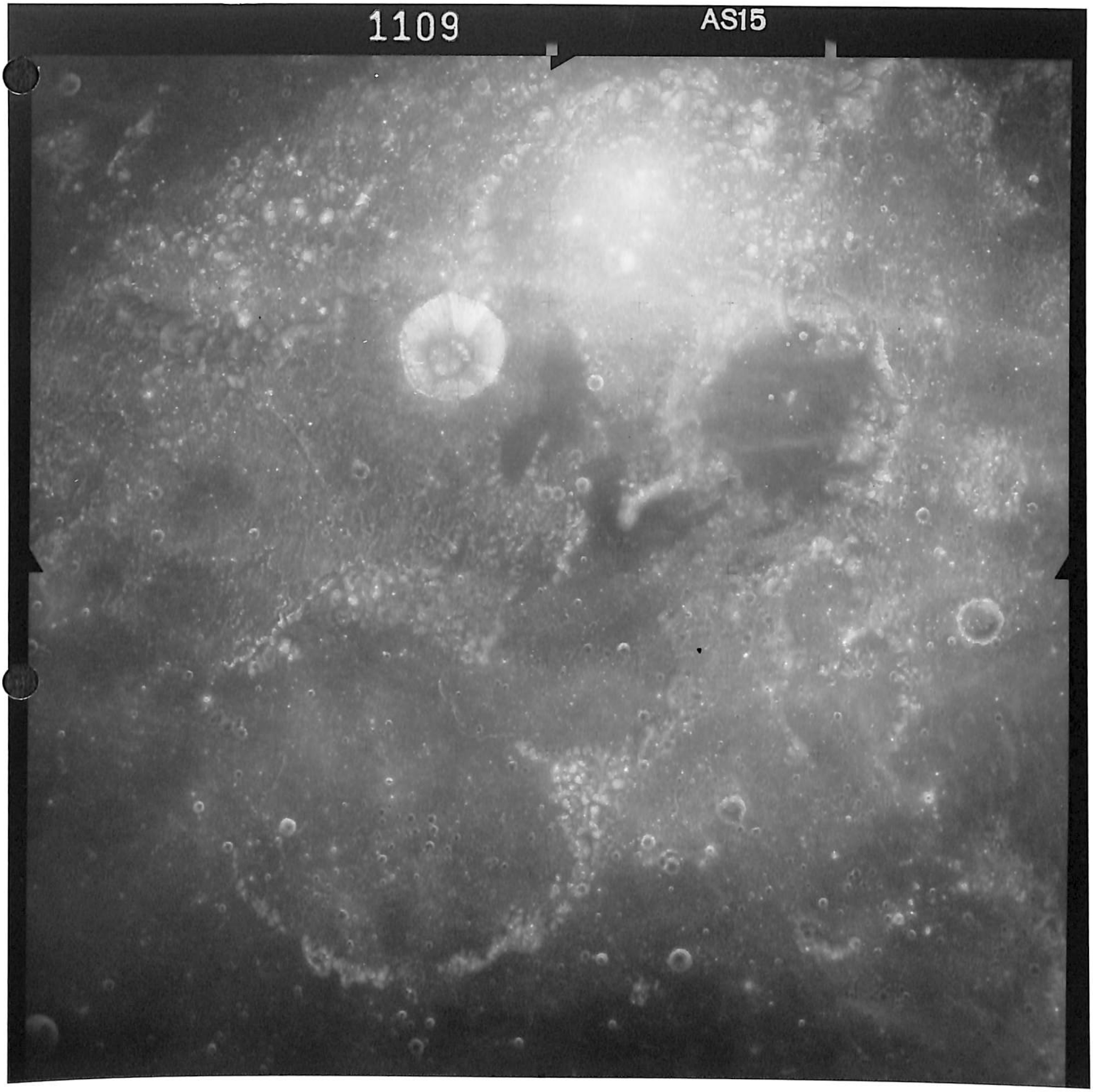
SMYTH II



N

SMYTH II

CAUCHY/TARUNTIUS



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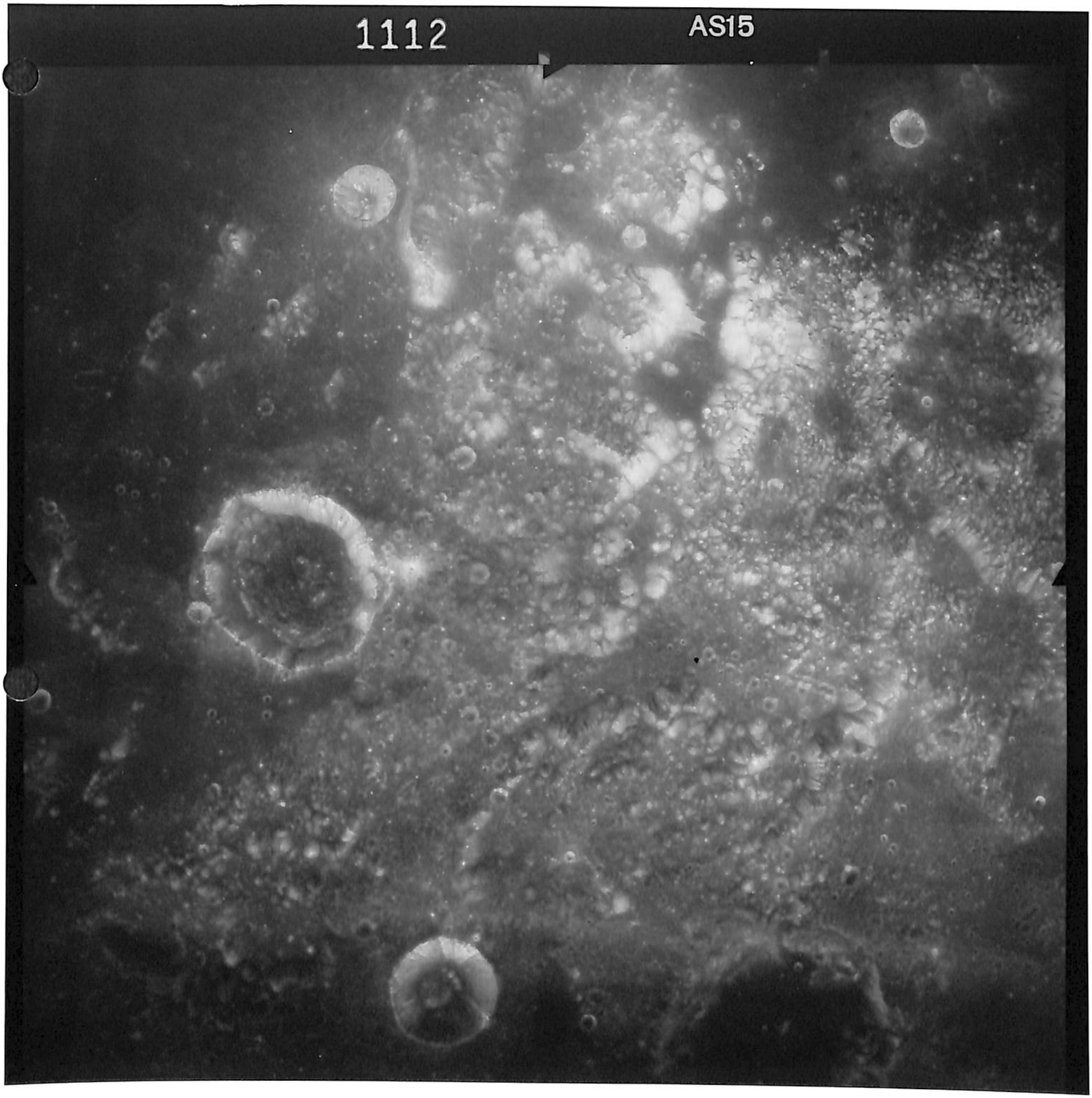

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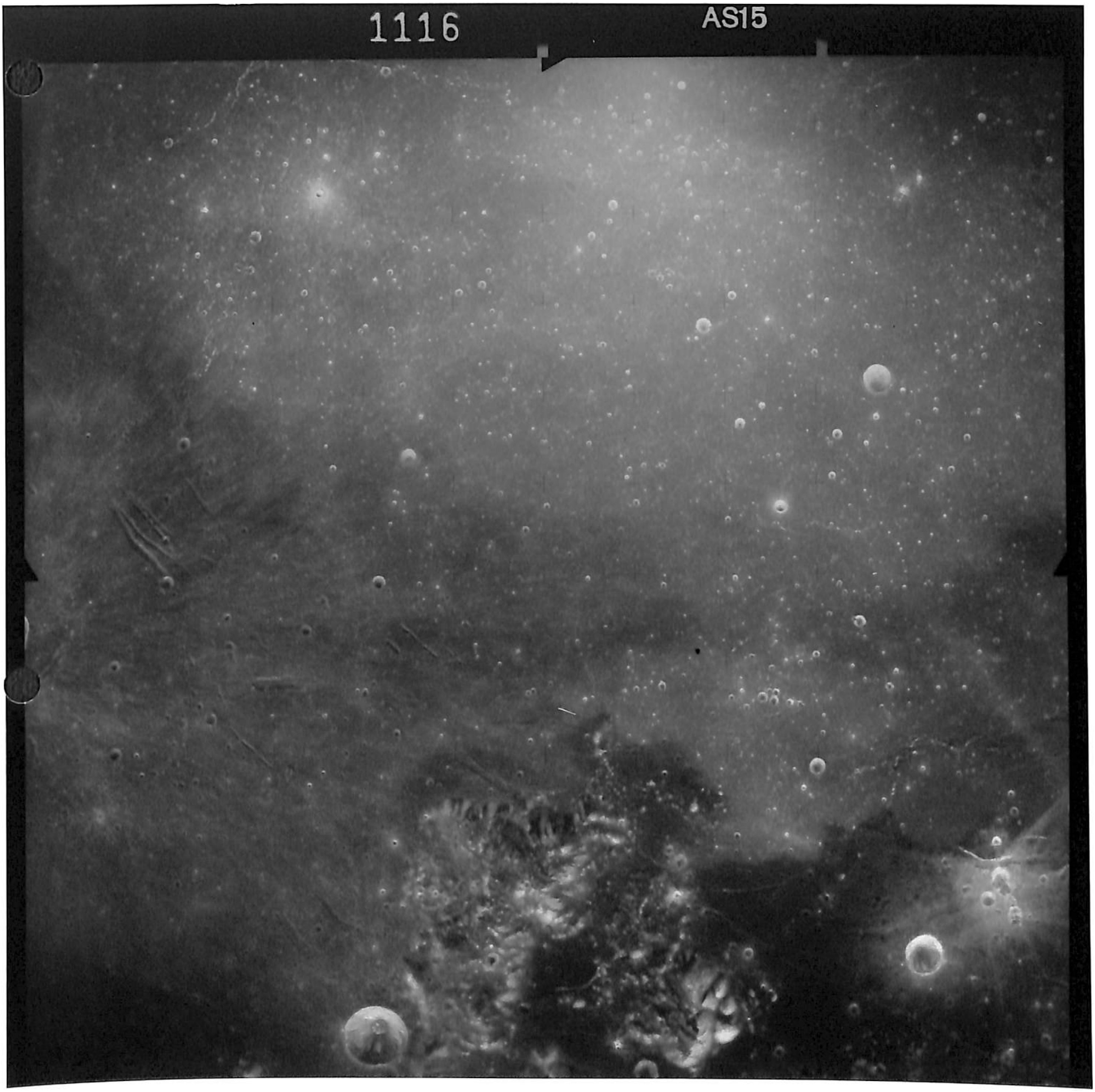

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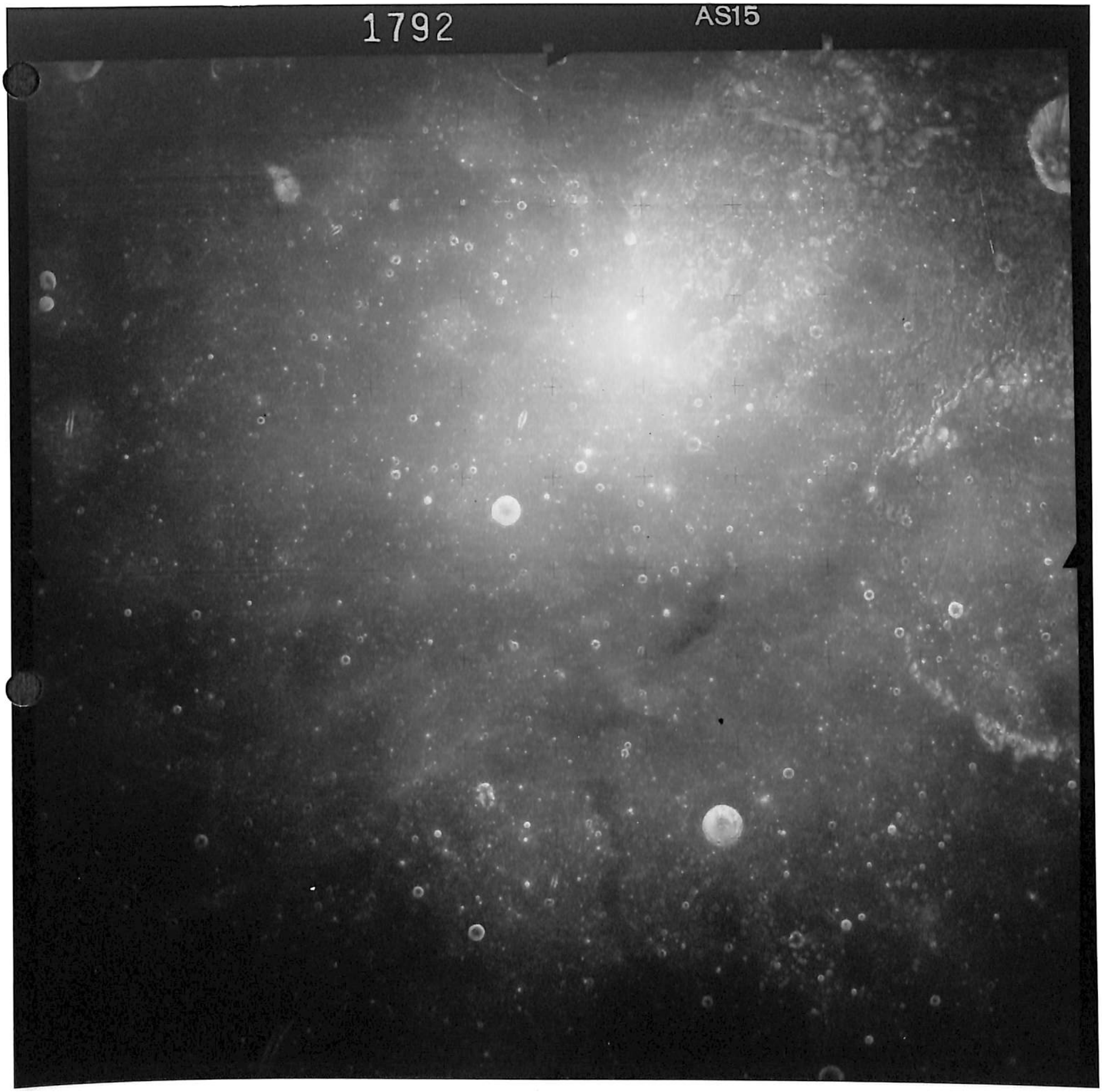

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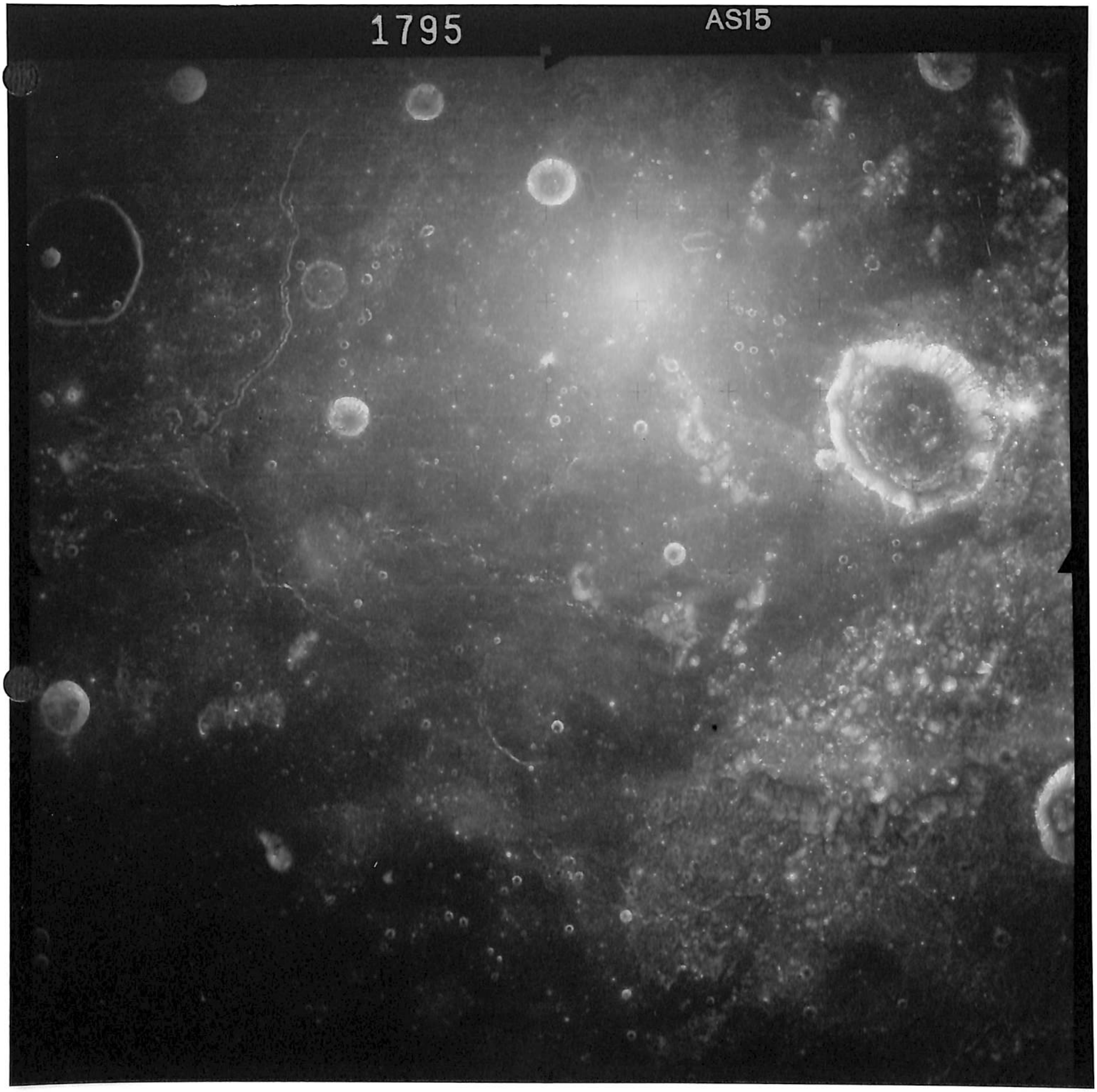

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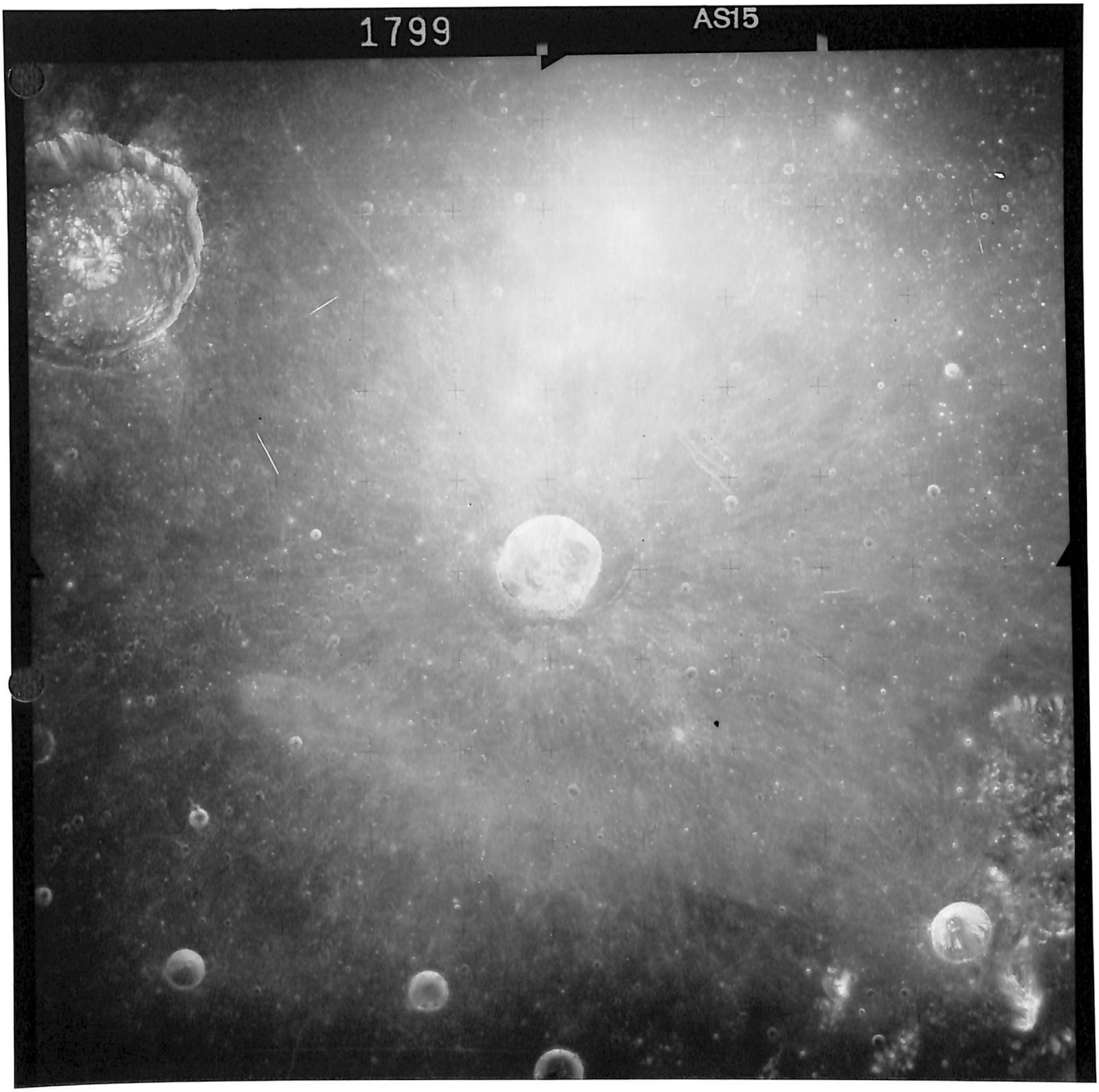

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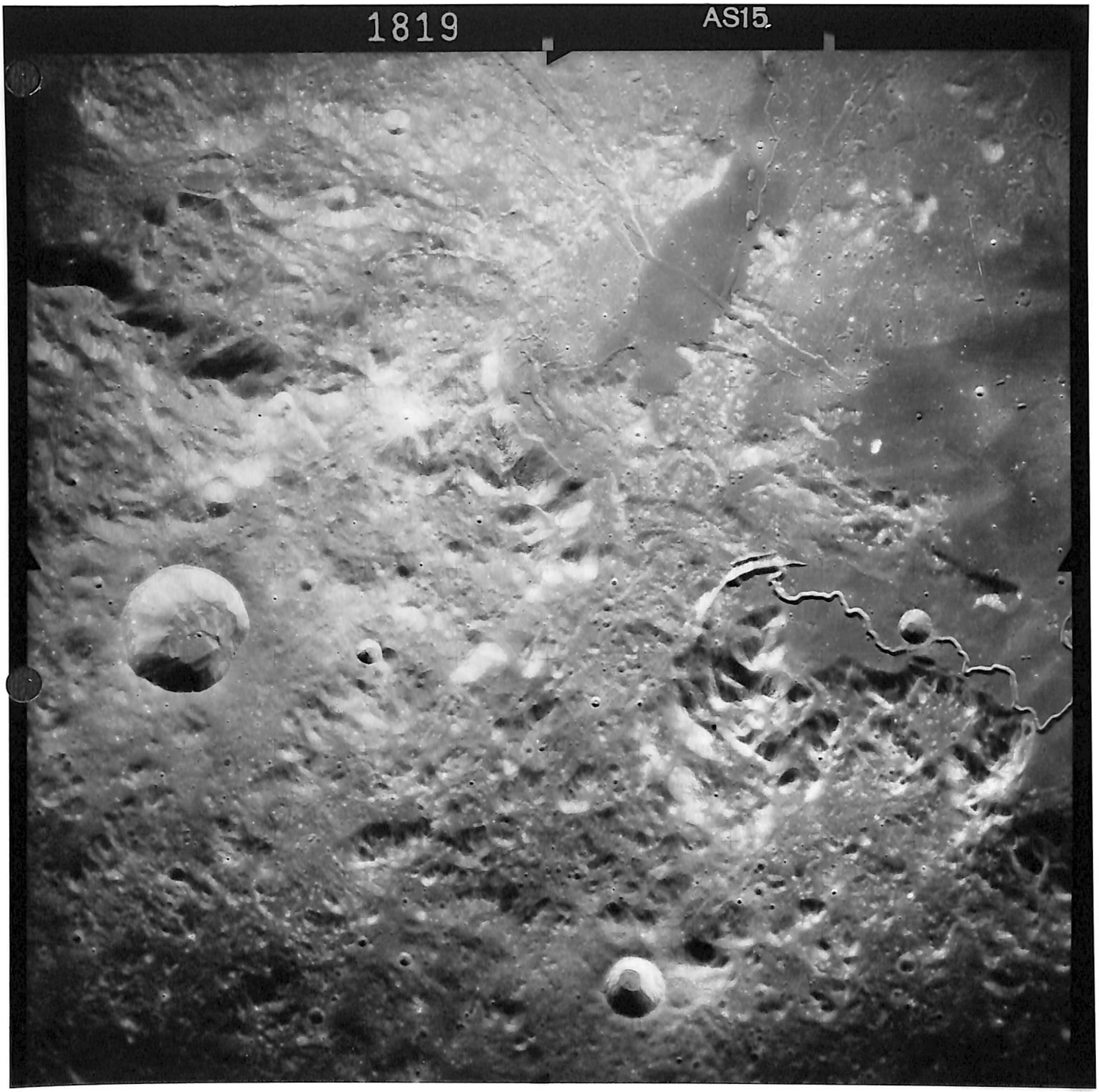

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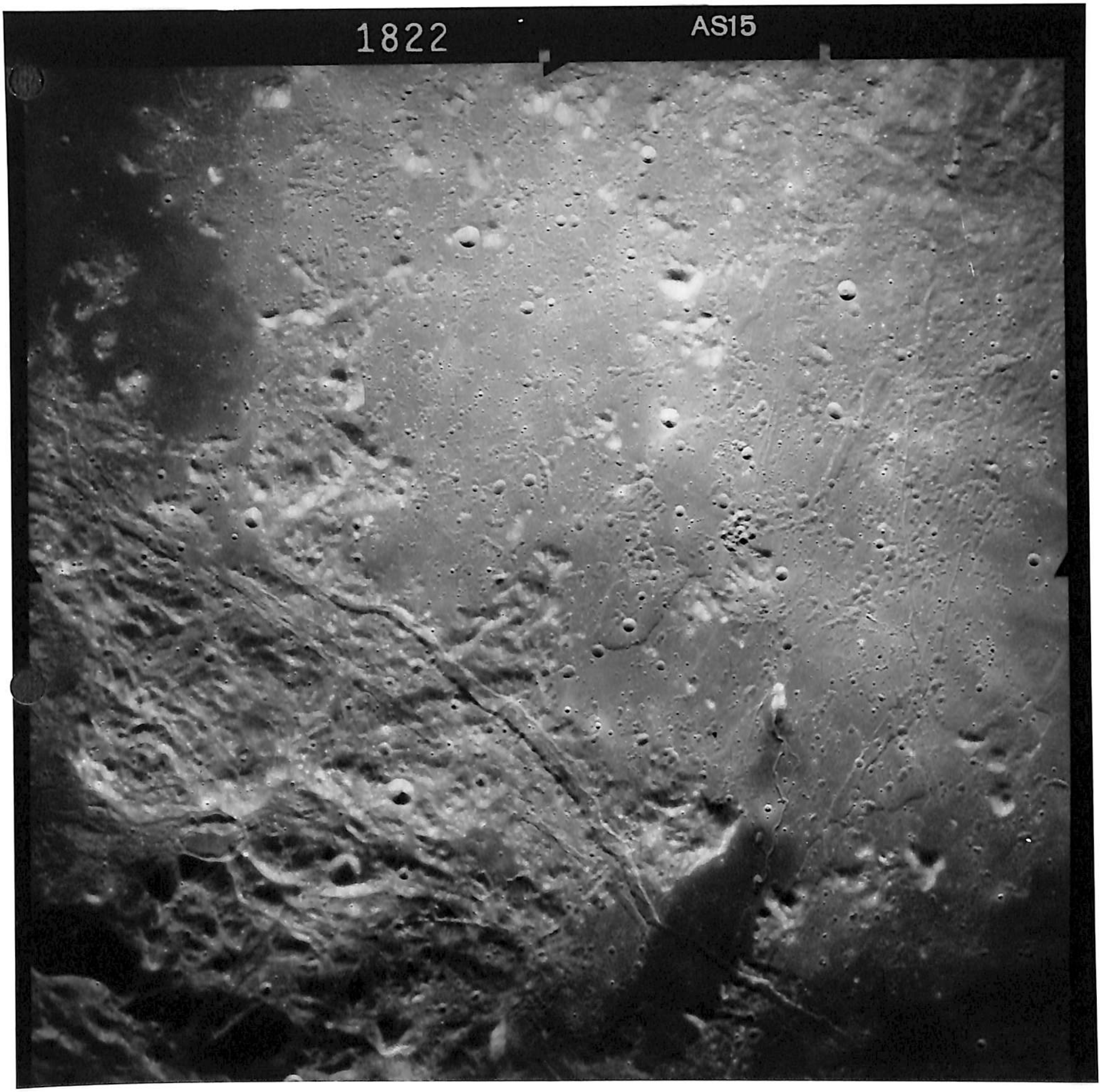

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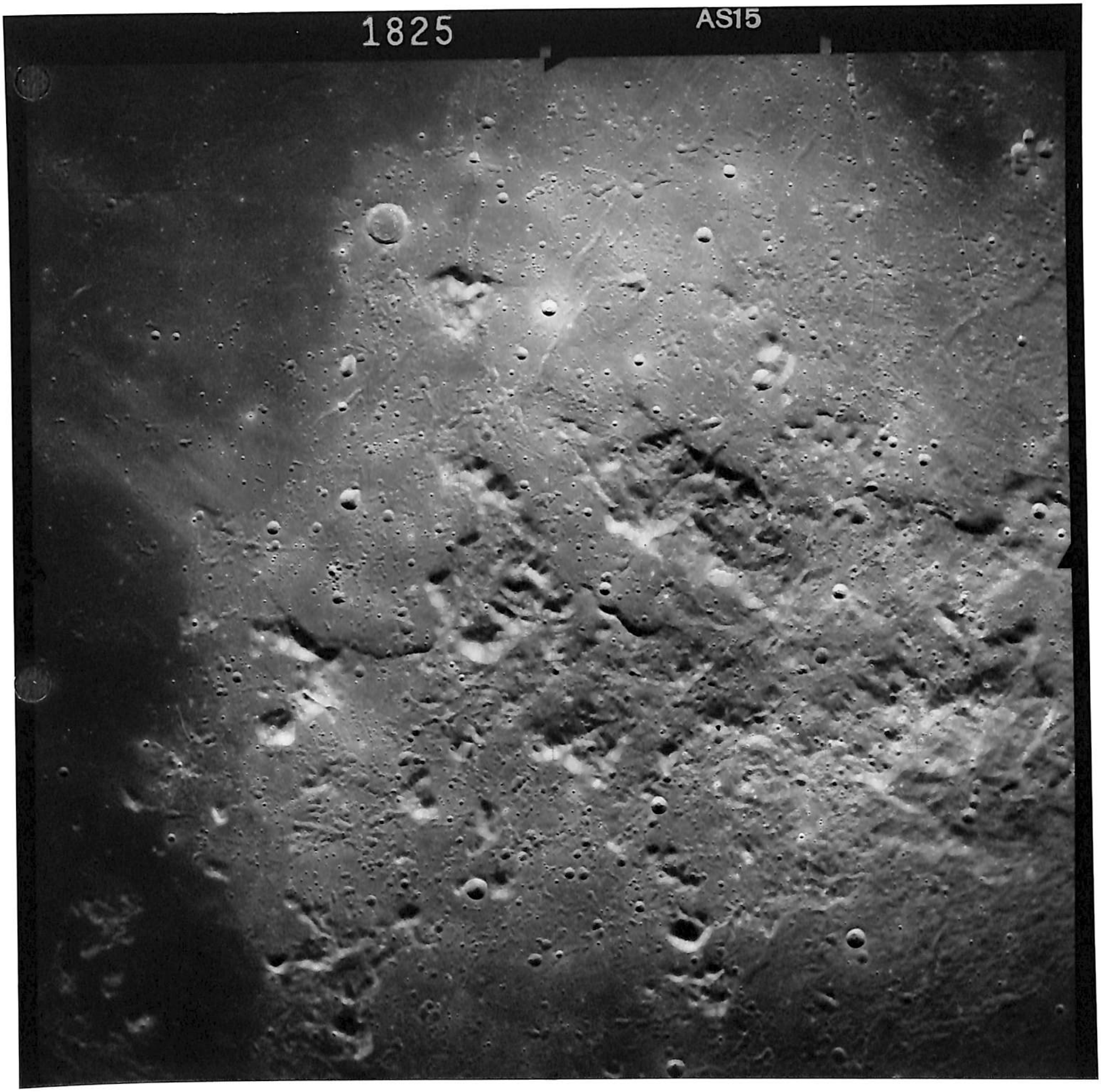

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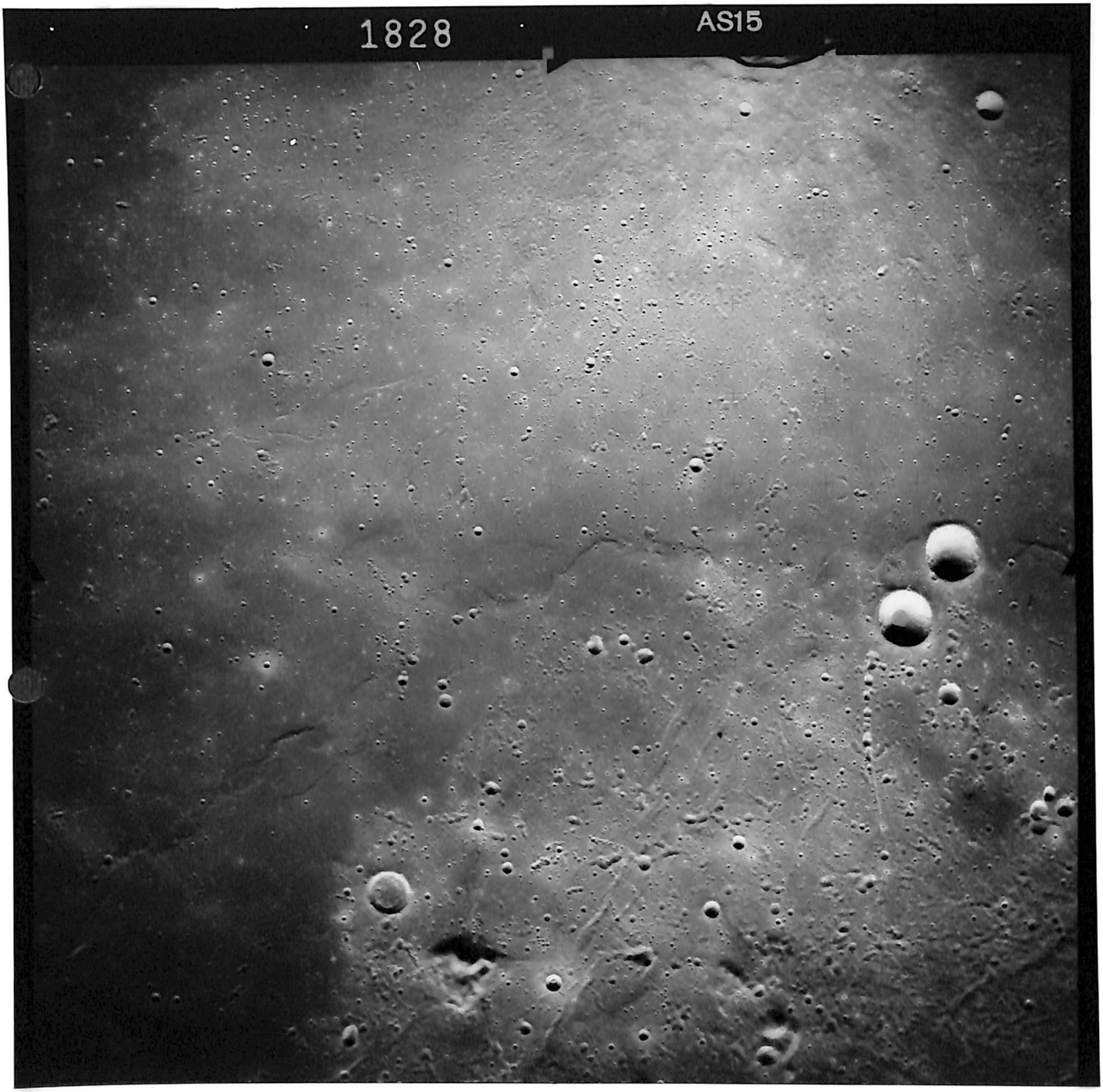

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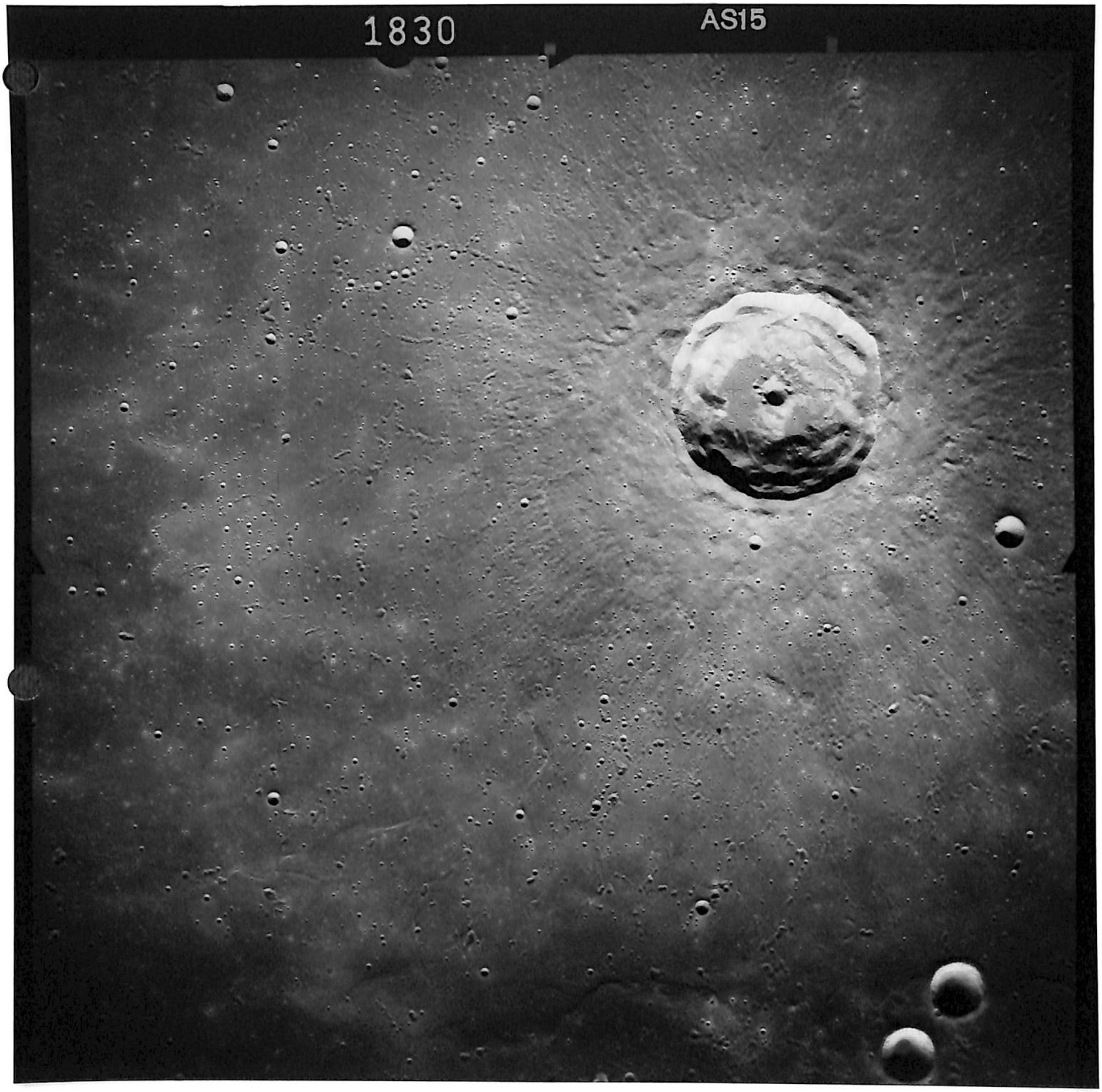

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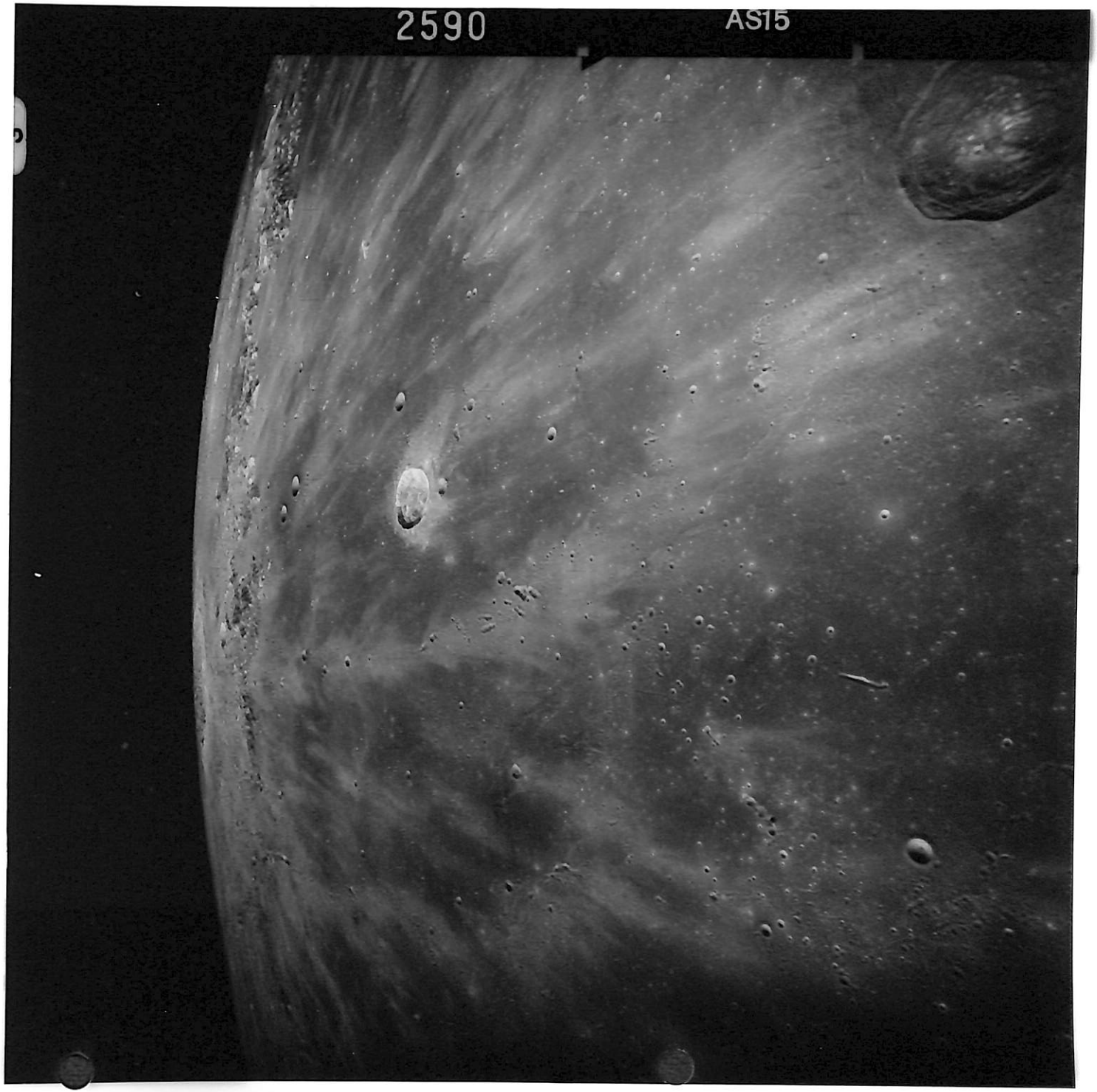

SOUTH IMBRIUM

SOUTH IMBRIUM

SOUTH IMBRIUM

PRINZ

LUNAR CONTINGENCY CHART

Contingency photos will be taken vertically, or through the CM window specified by MCC-H. The GET to start and stop each photo strip will be updated.

Chart Explanation

Red Groundtracks - Revs 3 and 75 for the nominal mission

Blue Groundtracks - Revs 3 and 80 for the CSM-only mission

Horizon Lines - Revs 1, 12 and 75 of the nominal mission

Target Listing - East to West

TARGET	FEATURE	CHART PANEL NO.	TARGET	FEATURE	CHART PANEL NO.
1	DAEDALUS	1	36	FABRY	3
2	BUYS BAILLOT	1	37	AL-BIRUNI	3
3	AITKEN	1	38	IBN YUNUS	3
4	SHAJN	1	39	GODDARD AREA	4
5	HEAVISIDE (SOUTH)	1	40	CRATER CHAIN	4
6	PAPALESKI	1	41	HAMILTON	4
7	MENDELSHTAM	1	42	HUMBOLDT	4
8	KEELER	1	43	BEHAIM	4
9	INGENUITY (SEA)	2	44	GAUSS	4
10	SCHIEMANN	2	45	ALHAZEN	4
11	KOHLSCHUETTER	2	46	AUZOUT	4
12	KOMAROV	2	47	PALITZSCH	4
13	VON NEUMANN	2	48	TRANSIENT EVENT AREA	4
14	CHAPLYGIN	2	49	CLEOMEDES D	4
15	TITOV	2	50	MESSALA	4
16	HOLETSCHEK	2	51	FURNERIUS	4
17	CRATER LOVELET	2	52	TRANSIENT EVENT AREA	4
18	SHATALOV	2	53	LUNA 15 IMPACT	4
19	CRATER CHAIN	2	54	CLEOMEDES	4
20	PIRQUET	2	55	LUNA 16	4
21	CHAUVENET	2	56	RHEITA VALLEY	4
22	HAGEN (NORTH)	2	57	PICARD	4
23	CRATER CHAIN	2	58	TARUNTIUS K	5
24	CRATER DOUBLET	2	59	CROZIER	5
25	TSIOLKOVSKY PEAKS	2	60	TARUNTIUS H	5
26	TSIOLKOVSKY FLOW	3	61	ATLAS	5
27	SAR CRATER	3	62	JANSSEN K	5
28	KING	3	63	SECCHI B	5
29	ABUL WAFA	3	64	BOHNENBERGER	5
30	CRATER CHAIN	3	65	UPLAND PLAINS	5
31	LOBACHEVSKY	3	66	JANSSEN	5
32	MOISEEV	3	67	ISIDORUS/CAPELLA	5
33	GIORDANO BRUNO	3	68	UPLAND PLAINS	5
34	FISSURE	3	69	FRACASTORIUS	5
35	PASTEUR (NORTHWEST)	3	70	CENSORINUS	5

TARGET	FEATURE	CHART PANEL NO.
71	PICCOLOMINI	5
72	POSIDONIUS	5
73	TORRICELLI B	5
74	BURG	5
75	BEAUMONT	5
76	ALTAI SCARP	5
77	RANGER 8 IMPACT	5
78	APOLLO 11 SITE	5
79	SURVEYOR 5	5
80	RABBI LEVI	5
81	BURG RILLE I	5
82	DANIELL RILLE I	5
83	ALTAI SCARP	5
84	ZAGUT B	5
85	BUCH B	6
86	DELAMBRE	6
87	DESCARTES	6
88	APOLLO 16 SITE	6
89	DESCARTES A	6
90	ABULFEDA	6
91	ARIADAEUS RILLE	6
92	ALEXANDER	6
93	ABENEZRA	6
94	CALIPPUS	6
95	BOSCOVICH	6
96	SULPICIUS GALLUS	6
97	KAISER	6
98	VOGEL	6
99	BIG-D	6
100	ALIACENSIS	6
101	CASSINI	6
102	APOLLO 15 SITE	6
103	ALPINE VALLEY	6
104	MILLER	6
105	ARISTILLUS	6
106	LUNA 2 IMPACT	6
107	APOLLO 15 LM/AS IMPACT	6
108	PITON B	6
109	BODE A	6
110	SURVEYOR 4 AND 6	6
111	ARZACHEL	6
112	RANGER 9 IMPACT	6
113	SPECTRAL-COLOR BOUNDARY	6
114	ALPHONSUS FLOOR	6
115	ALPETRAGIUS	6
116	DAVY CRATER CHAIN	6
117	DAVY A	6
118	LASSELL	6
119	STRAIGHT WALL	6
120	BALL	6
121	PICO	6
122	CINDER CONE	6
123	ERATOSTHENES	6
124	TYCHO FLOOR	6
125	GUERICKE C	6
126	SURVEYOR 7	6
127	APOLLO 15 S-IVB	6
128	NICOLLET	6
129	PITATUS	6
130	SPECTRAL COLOR BOUNDARY	6
131	COPERNICUS CD	6
132	PICO B	6
133	CARLINI D	6
134	PARRY RILLE V	6
135	APOLLO 14 SITE	6
136	APOLLO 14 LM/AS IMPACT	6
137	COPERNICUS PEAKS	7
138	RANGER 7 IMPACT	7
139	APOLLO 12 LM/AS IMPACT	7
140	DRAPER C	7
141	SPECTRAL COLOR BOUNDARY	7
142	BULLIALDUS	7
143	APOLLO 12 SITE	7
144	CARLINI	7
145	APOLLO 14 S-IVB	7
146	AGATHARCHIDES	7
147	CAMPANUS	7
148	EUCLIDES	7
149	APOLLO 13 S-IVB	7
150	JURA MOUNTAINS	7
151	RED STUFF	7
152	RAMSDEN	7
153	HAINZEL	7
154	LUNAKHOD	7
155	ENCKE B	7
156	HERIGONIUS (WEST)	7
157	GASSENDI	7
158	RADAR/IR ANOMALY	7
159	ENCKE X	7
160	JURA DOMES	7
161	DOPPLEMAYER	7
162	VITELLO A	7
163	RADAR/IR ANOMALY	7
164	SURVEYOR I	7
165	FLAMSTEED B	7
166	GASSENDI F	7

TARGET	FEATURE	CHART PANEL NO.
167	RADAR/IR ANOMALY	7
168	MARIUS A	7
169	ARISTARCHUS	7
170	SUESS	7
171	RADAR/IR ANOMALY	7
172	SHARP RILLE I	7
173	HANSTEEN ALPHA	7
174	VIETA RIM	8
175	HERMANN F	8
176	MARIUS HILLS	8
177	REINER GAMMA	8
178	RUEMKER MOUNTAINS	8
179	SIRSALIS F/J	8
180	SIRSALIS	8
181	GRIMALDI G	8
182	SIRSALIS RILLE	8
183	ROCCA FA AREA	8
184	CRUEGER	8
185	INGHIRAMI	8
186	KRAFFT RILLE	8
187	INGHIRAMI VALLEY	8
188	RICCIOLI	8
189	LAVOISIER C	8
190	ULUGH BEIGH AREA	8
191	CROOKES	1
192	MOHOROVICIC	1
193	UNNAMED CRATER	1
194	OPPENHEIMER	1
195	MAKSUTOV	1
196	ICARUS	1
197	ORLOV	1
198	KRASOVSKY	1
199	DE VRIES	1
200	RACAH	1