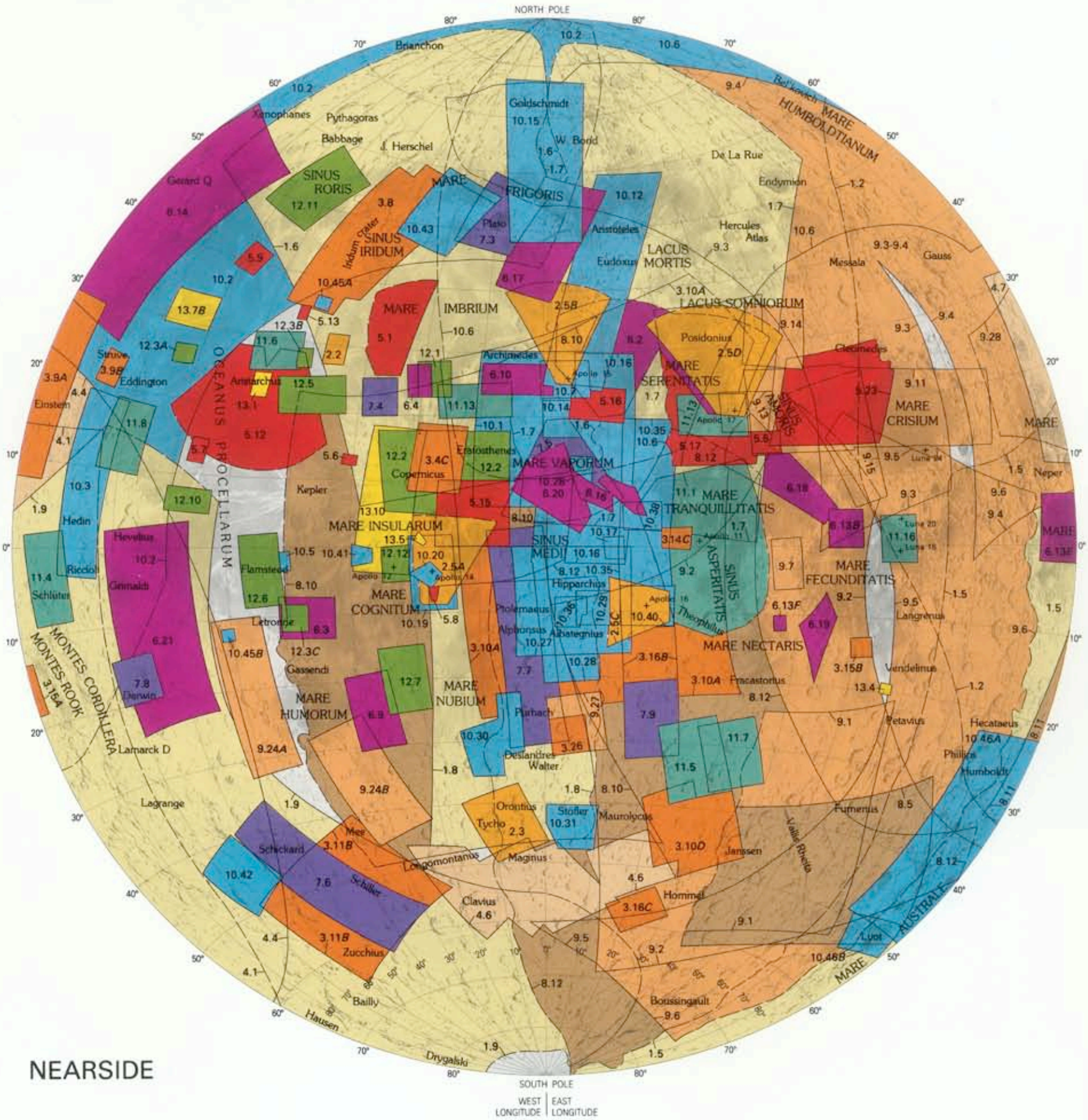
# PLATE 1. INDEX TO PHOTOGRAPHIC ILLUSTRATIONS




NEARSIDE

## Chapter

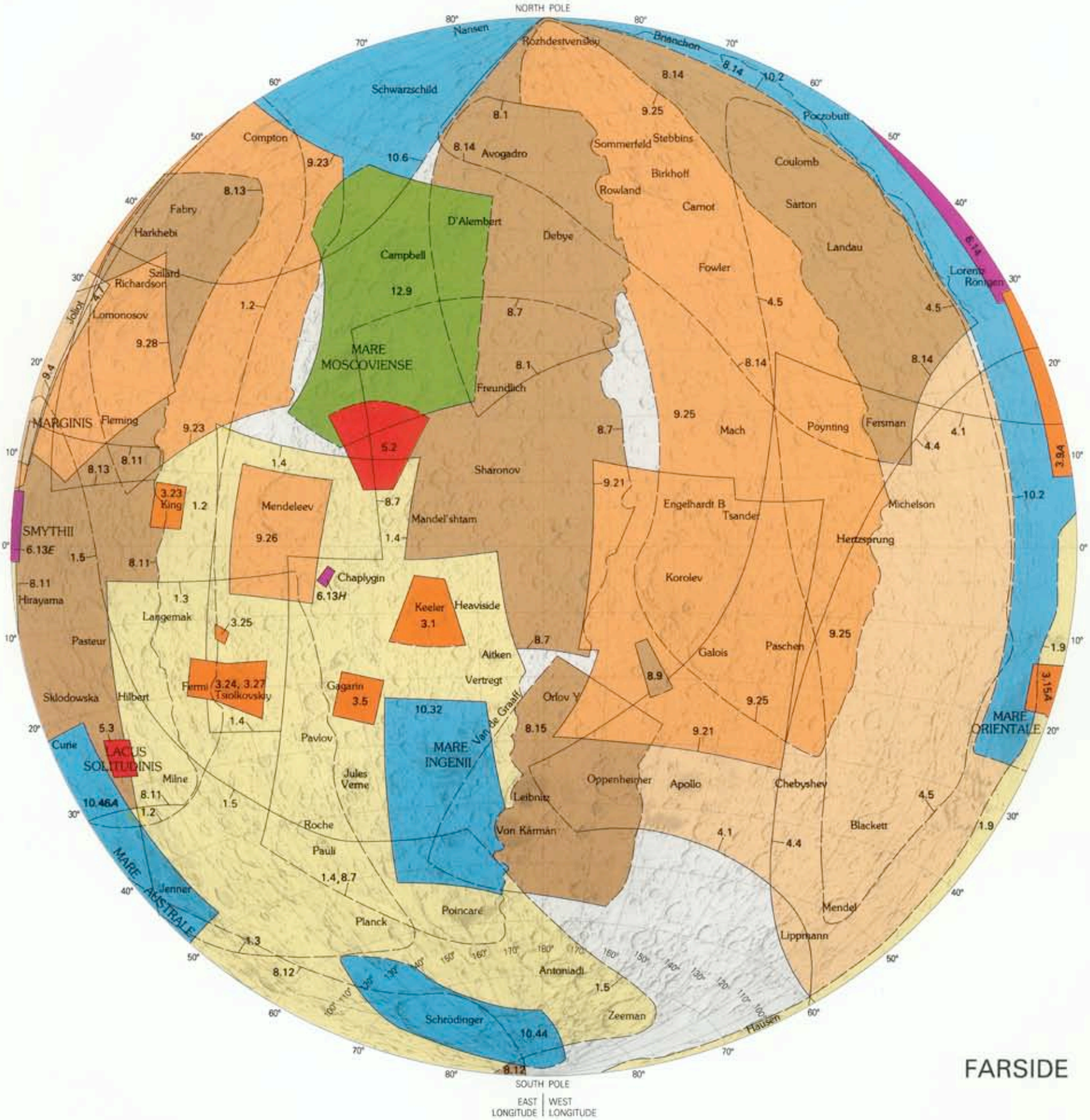
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|

10.31

Area of photograph and figure number

Chapter number precedes decimal point, figure number within chapter follows. Photographs of small areas, individual craters, and basin centers (fig. 4.3) are not shown. Boundaries dashed where approximate.

\+
Landing site

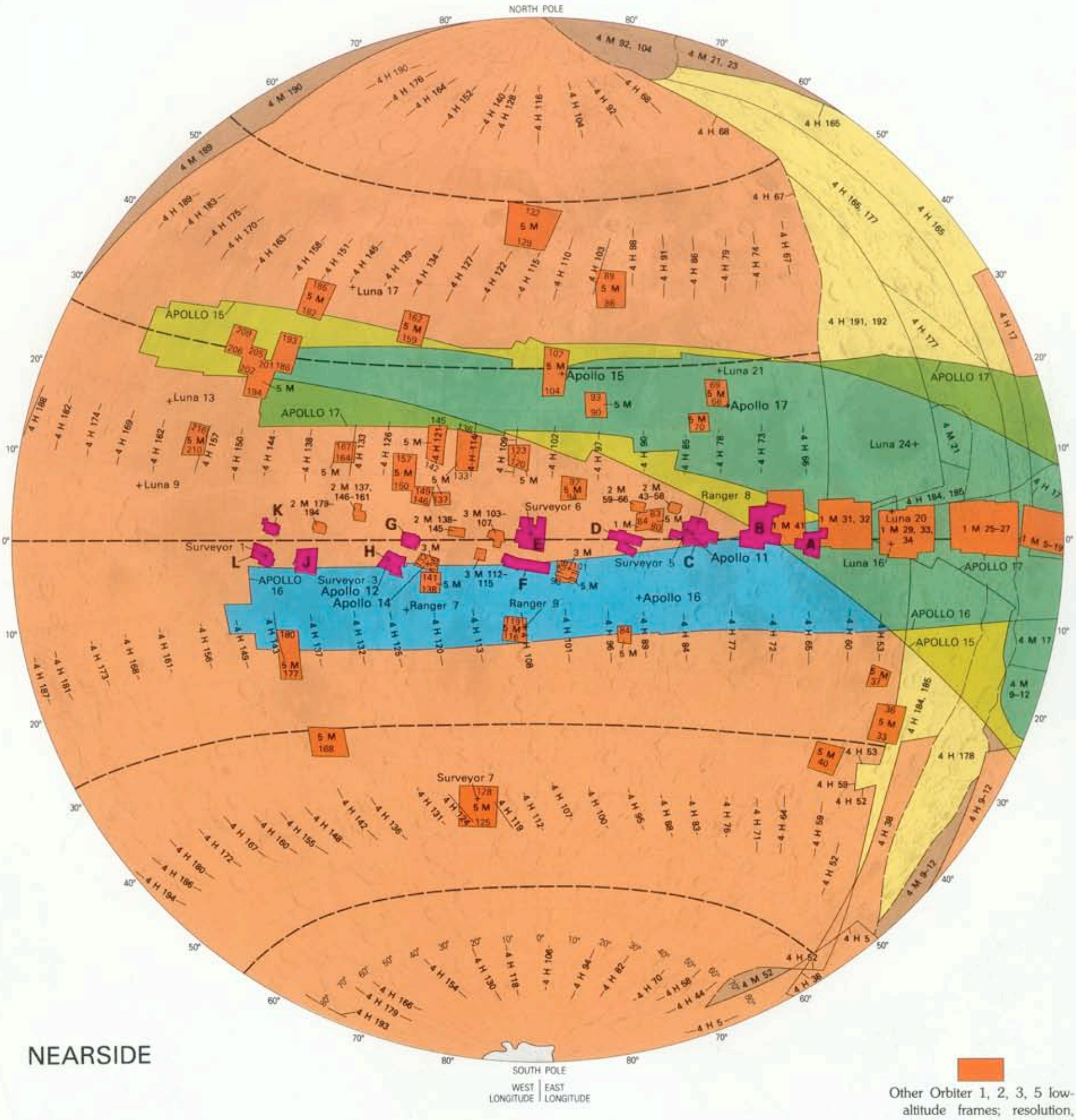



FARSIDE

Each 10° of latitude equals about 300 km

Shaded-relief base by J. L. Inge, U.S. Geological Survey; reproduced by courtesy of the National Geographic Society.

# PLATE 2. PHOTOGRAPHIC COVERAGE OF THE MOON, SHOWING




## NEARSIDE

Areas multiply photographed by Lunar Orbiter; resolution, 10-20 m

- **A** 1 M 44, 50-67; 3 M 25, 31, 33; 5 M 38, 41, 42, 44-51
- **B** 1 M 48, 49, 68-83; 2 M 5, 7, 9, 11-20, 25-32, 35-42; 3 M 5-19 (odd nos.); 5 M 52, 55-63
- **C** 1 M 85-100; 2 M 67-74, 76-91; 3 M 58, 60, 63, 66, 68, 70; 5 M 64, 71-78
- **D** 1 M 105-112; 2 M 94; 3 M 80-83
- **E** 1 M 118-133; 2 M 93, 95-111, 113-136; 3 M 84, 86-101; 5 M 108-115
- **F** 1 M 141-148, 3 M 116-119
- **G** 1 M 137, 139, 140; 2 M 163-178; 3 M 120, 124-131
- **H** 1 M 157-172; 3 M 136-160
- **J** 1 M 176-183; 3 M 171, 173-180; 5 M 169-176
- **K** 2 M 195, 197-212; 3 M 161, 163-170
- **L** 1 M 185-215; 3 M 172, 181-212

——— Actual boundary of photographs

— — — Approximate boundary of best coverage

An H-frame is centered within each M-frame: each H-frame has an eightfold better resolution than the corresponding M-frame. X-ray spectrometer data acquired along Apollo 15 track between long 155° E. and 40° W. and along Apollo 16 track between long 140° E. and 30° W.; gamma-ray spectrometer data acquired along entire Apollo 15 and 16 tracks including unphotographed regions (see chap. 5). Orbiter resolutions after Hansen (1970); complete plots of Orbiter coverage given by Hansen (1970), Kosofsky and El-Baz (1970), and Bowker and Hughes (1971). Apollo data after Masursky and others (1978).

Other Orbiter 1, 2, 3, 5 low-altitude frames; resolution, 10-40 m. Numbers of Orbiter 5 M-frames are inclusive

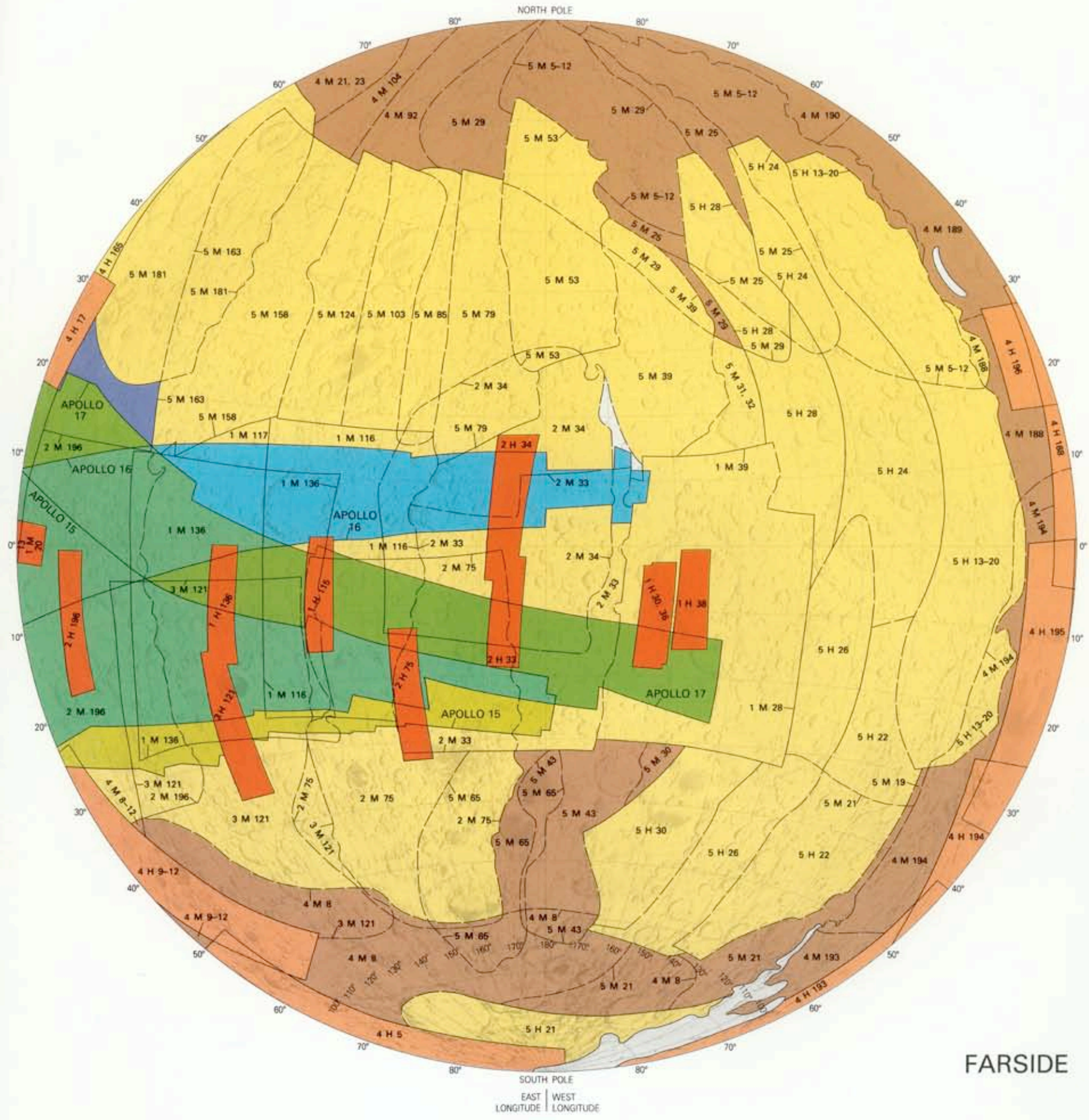
Orbiter 4 low-altitude H-frames, resolution, 60-100 m. Denoted by midpoint; adjacent rows overlap in zone centered on heavy dashed line

Other Orbiter; resolution, 150-300 m

Other Orbiter; resolution, >300 m

# BEST PHOTOGRAPH OR SET OF PHOTOGRAPHS OF EACH AREA






APOLLO 15 | APOLLO 16 | APOLLO 17 | Overlap

Apollo orbital photographs (panoramic and mapping; near-vertical only); resolution 2-30 m

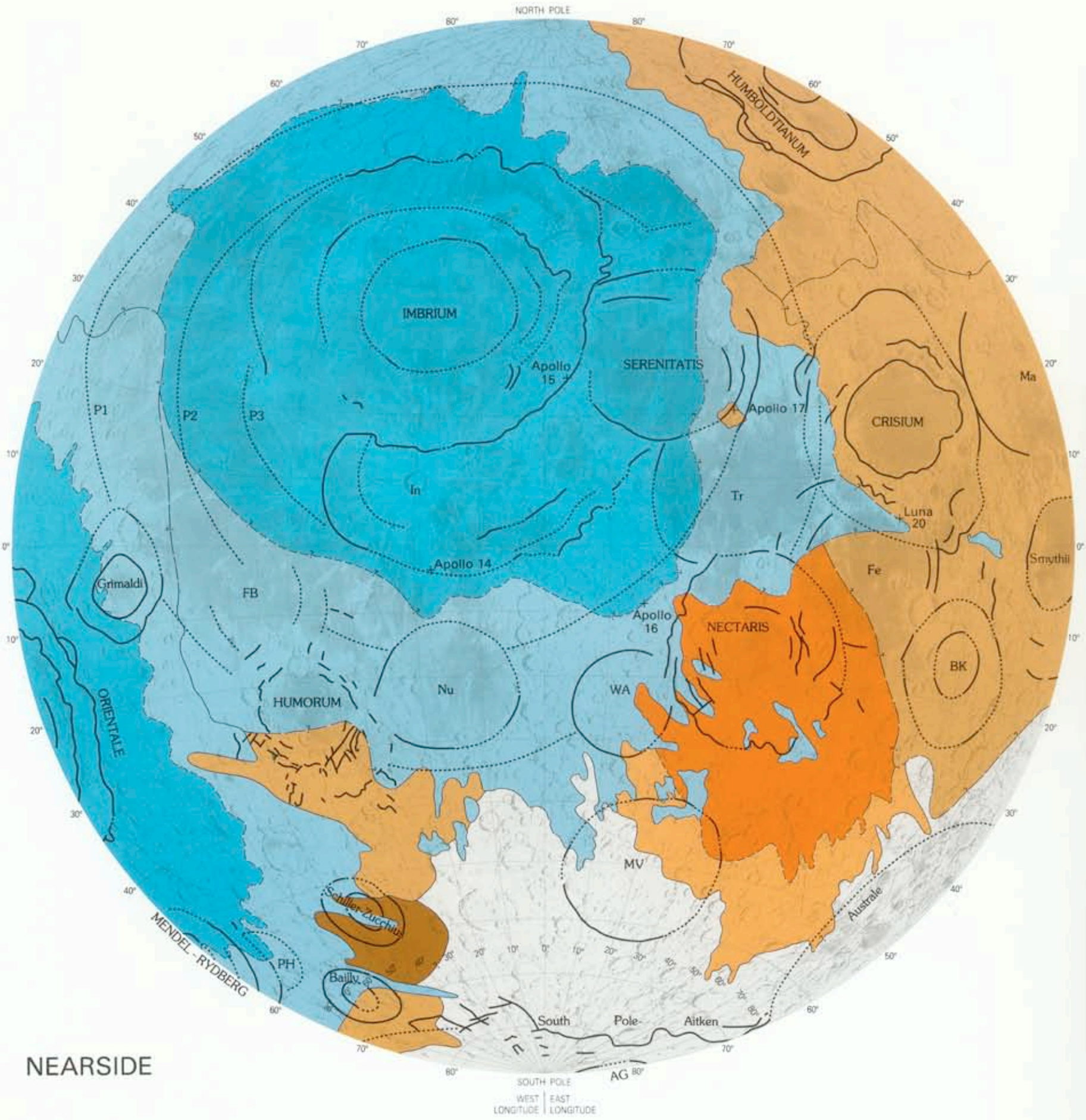
Apollo 16 frames taken after trans-Earth injection; resolution, 150-300 m

No coverage

\+ Landing site

Shaded-relief base by J. L. Inge, U.S. Geological Survey; reproduced by courtesy of the National Geographic Society.

# PLATE 3. GEOLOGIC MAP OF RINGED BASINS




NEARSIDE

Deposits recognized

Rings only recognized

Imbrian — Undivided, Inner, Outer

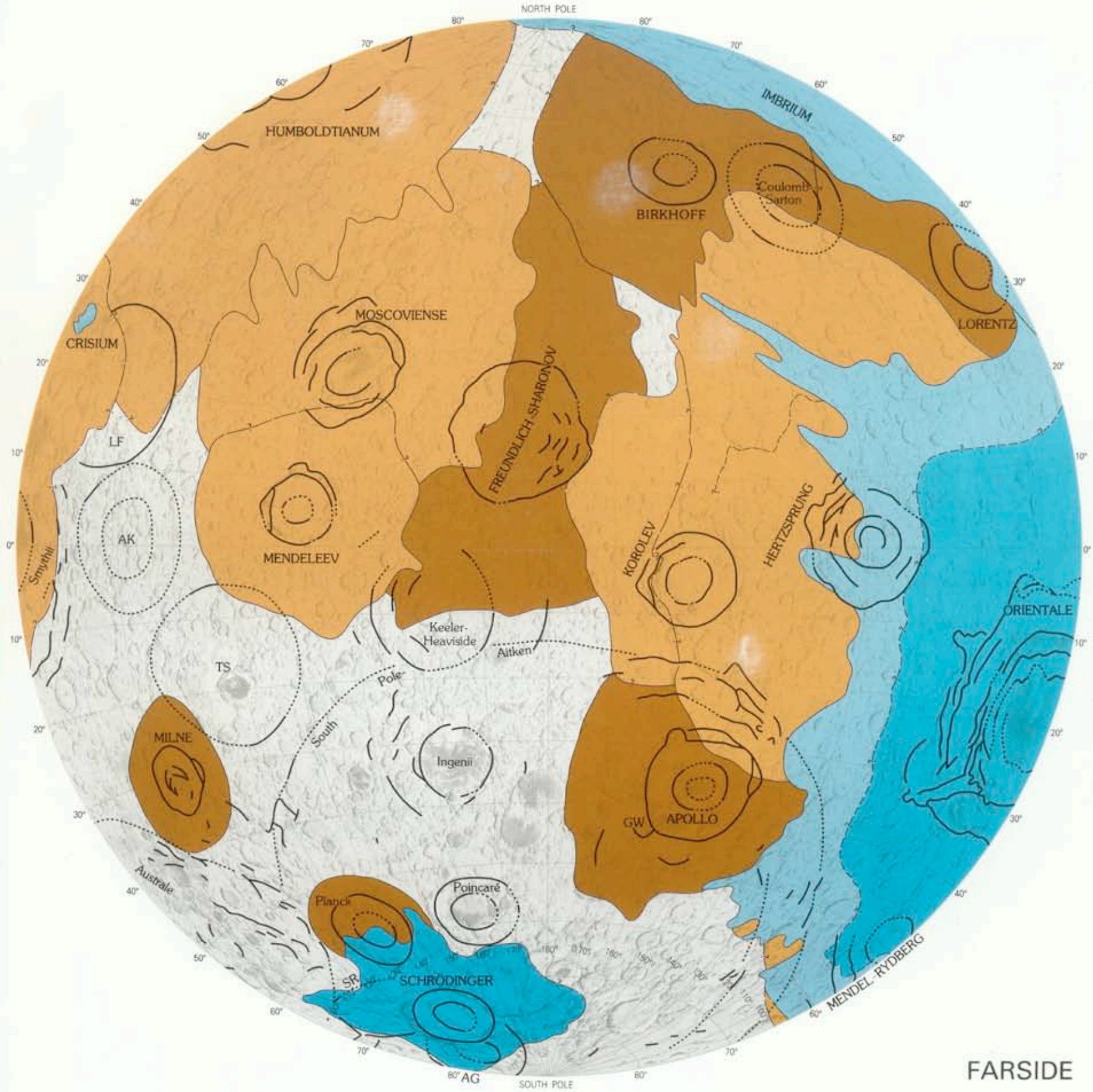
Nectarian — Undivided, Inner, Outer

Pre-Nectarian — Undivided

Pre-Nectarian — Undivided

Basin ring or ring arc

Dotted where inferred. Names of definite basins with mappable deposits are in capital letters, and their deposits are shown in color; mapped units include all but minor deposits of each named basin and include inferred buried extensions. Names of definite basins without mappable deposits are in lowercase letters. Indefinite basins are indentified by initials: AG, Amundsen-Ganswindt; AK, Al-Khwarizmi / King; BK, Balmer-Kapetyn; FB, Flamsteed-Billy; Fe, Fecunditatis; GW, Grissom-White; In, Insularum; LF, Lomonosov-Fleming; Ma, Marginis; MV, Mutus-Vlacq; Nu, Nubium; P1, P2, P3, Procellarum; PH, Pingré-Hausen; SR, Sikorsky-Rittenhouse; Tr, Tranquillitatis; TS, Tsiolkovskiy-Stark; WA, Werner-Airy




FARSIDE

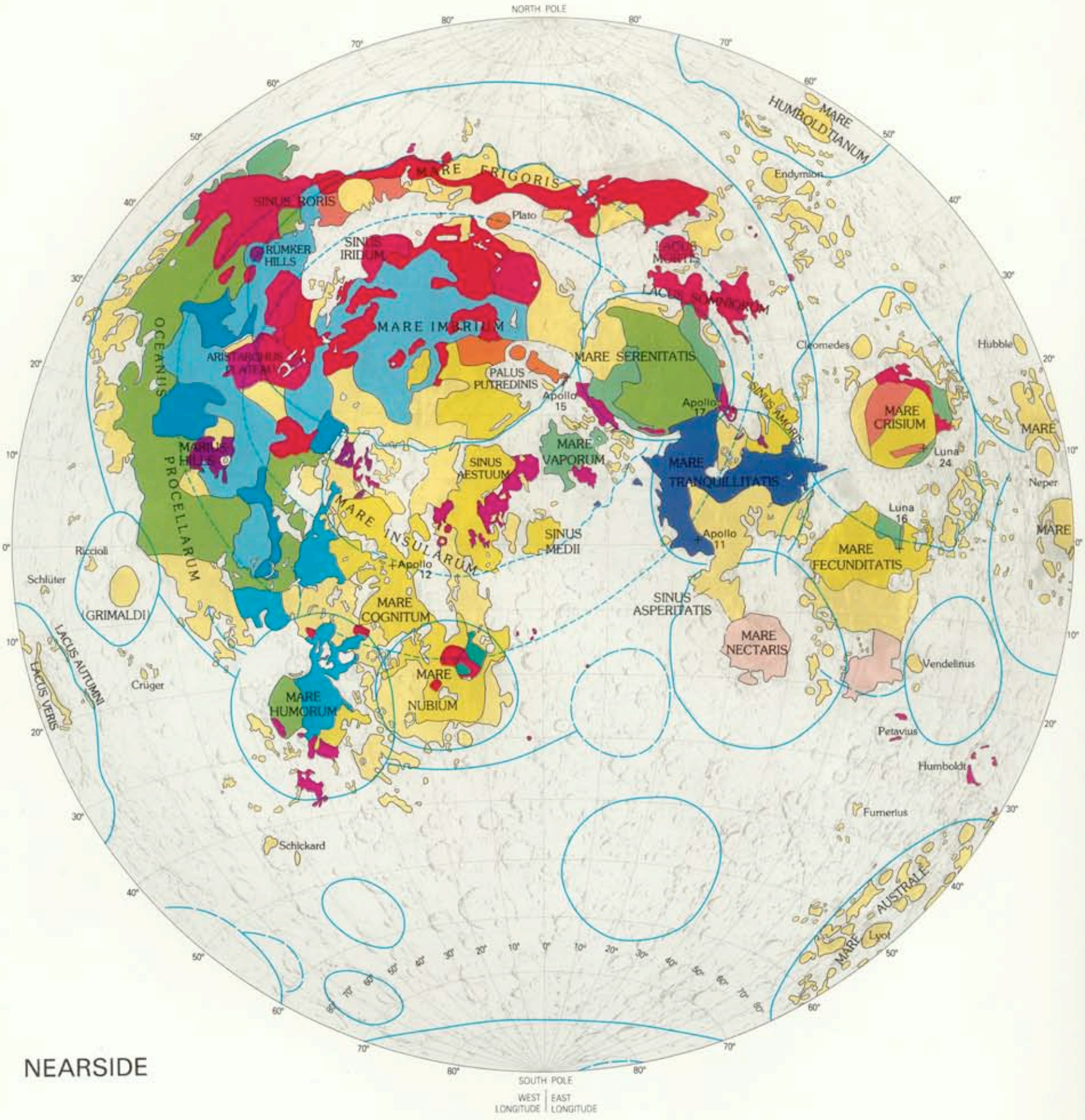
Contact
Queried where indefinite or buried

Approximate contact between inner and outer deposits. Queried where doubtful

+
Landing site

Shaded-relief base by J. L. Inge, U.S. Geological Survey; reproduced by courtesy of the National Geographic Society.

# PLATE 4. MARIA




NEARSIDE

SPECTRAL CLASS 1/

| HDWA | HDSA | hDSA | hDSP | hDG– | hDWA | mISP | mIG– | mBG– | LISP | LIG– | LBG– | LBSP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|

Dark mantling material

Cone and dome material

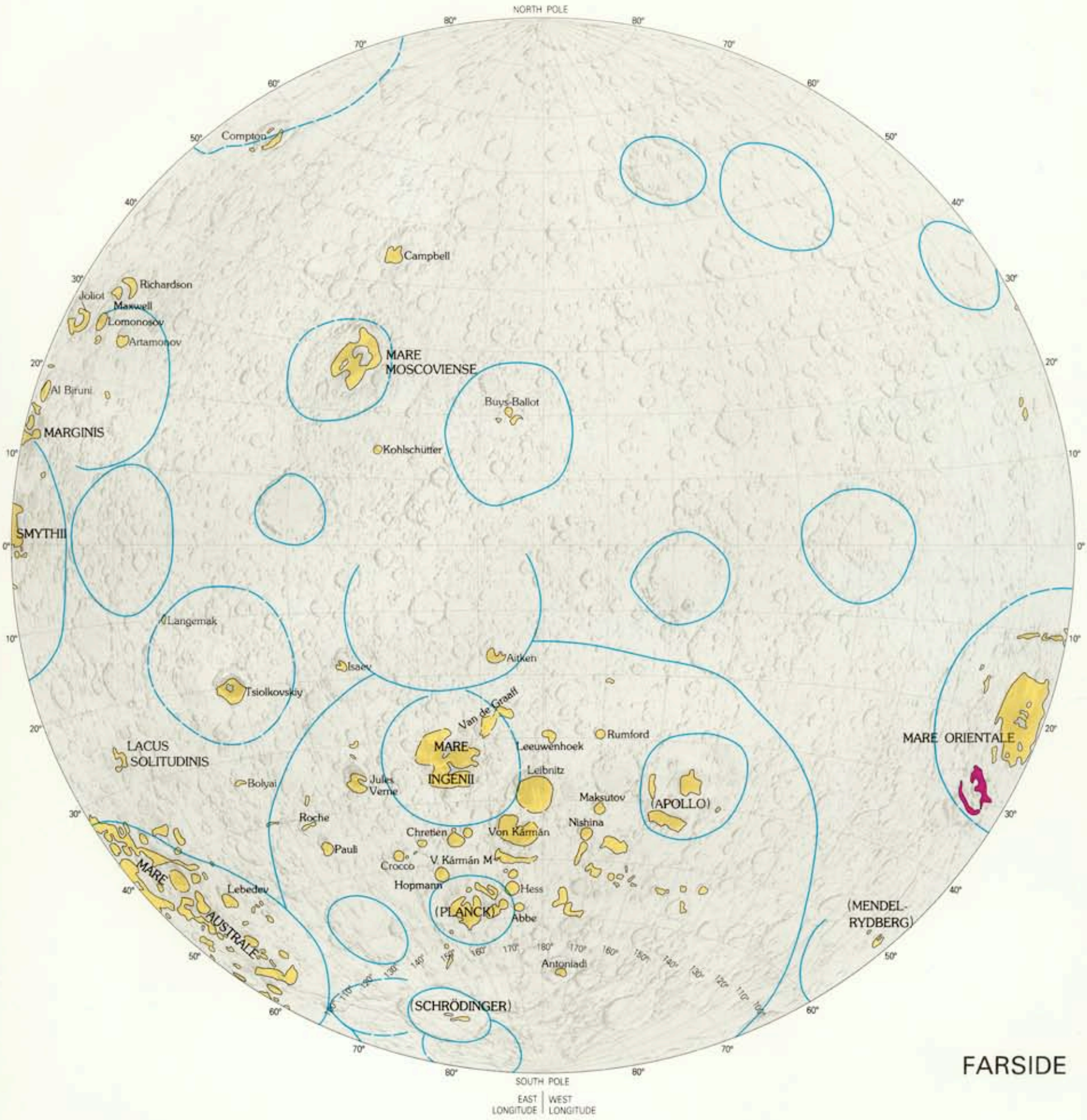
Undivided (complex or unknown)

Terra

Projection of mare-terra contact beneath younger crater deposits

Basin rim. Dashed where uncertain

Inner ring of Procellarum basin



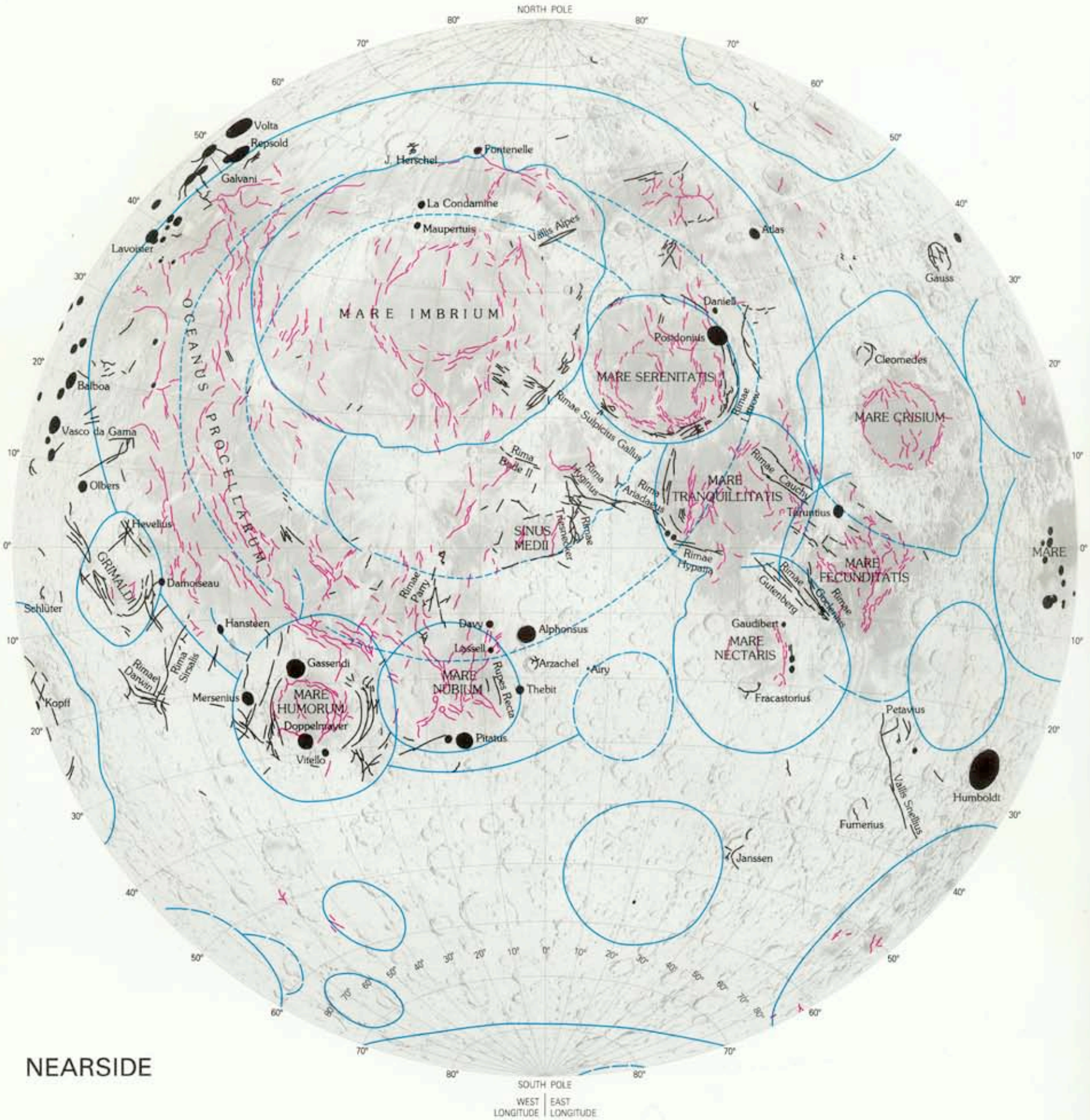

FARSIDE

[1]/NOTE:
Spectral classes (see table 5.1) from Pieters (1978; see Basaltic Volcanism Study Project, 1981, pl. 2.8), redrawn here on the basis of color-difference image (fig. 5.20). Mare Humorum units from Pieters and others (1975); Mare Crisium units from Head and others (1978a). Lowercase names and names in parentheses refer to basins or craters containing otherwise unnamed maria

\+
Landing site

Shaded-relief base by J. L. Inge, U.S. Geological Survey; reproduced by courtesy of the National Geographic Society.

# PLATE 5. STRUCTURAL FEATURES




NEARSIDE

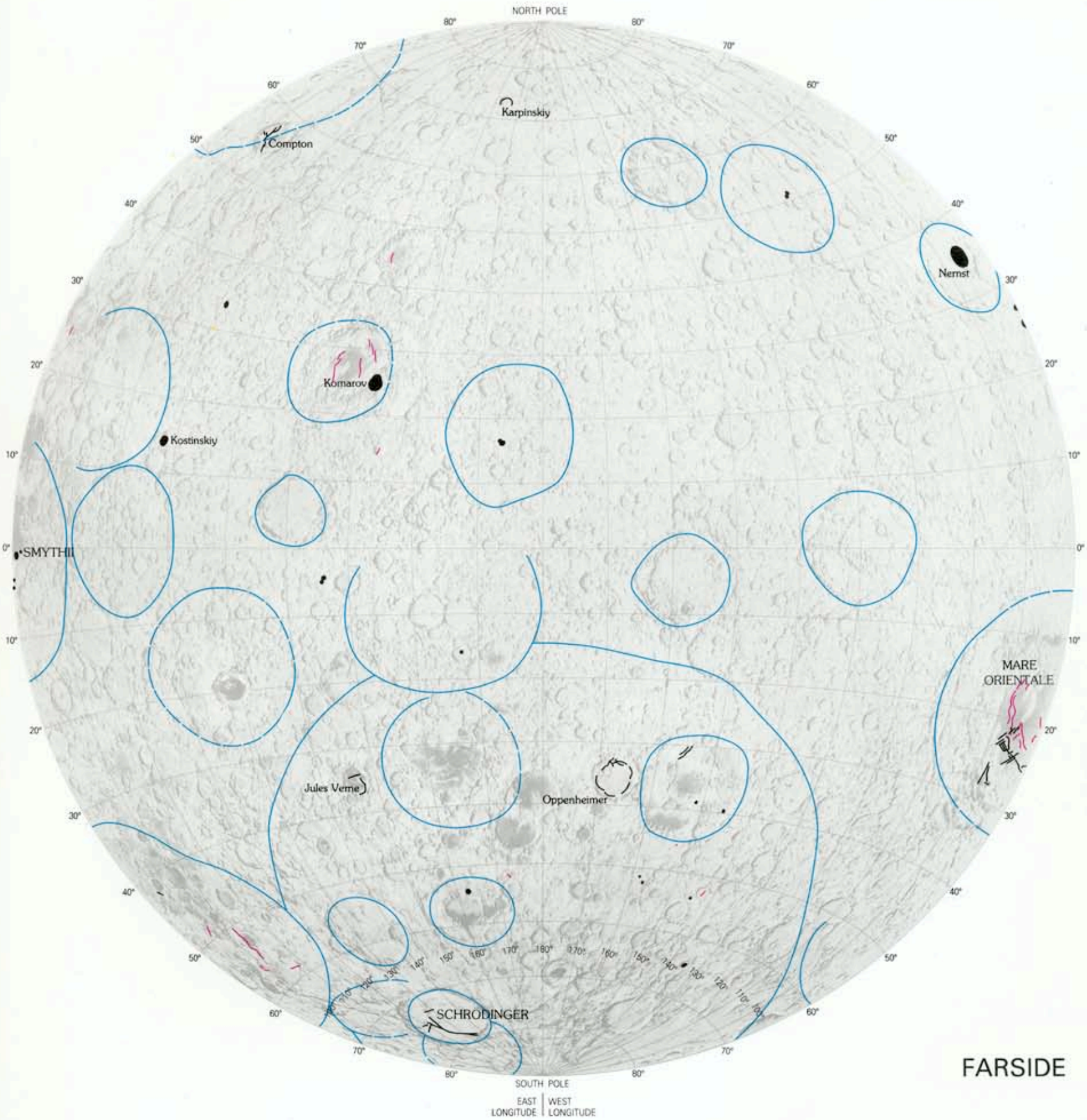
Mare ridge

Fault (mostly graben)

Fractured crater floor

Basin rim. Dashed where uncertain

Inner ring of Procellarum basin




# FARSIDE

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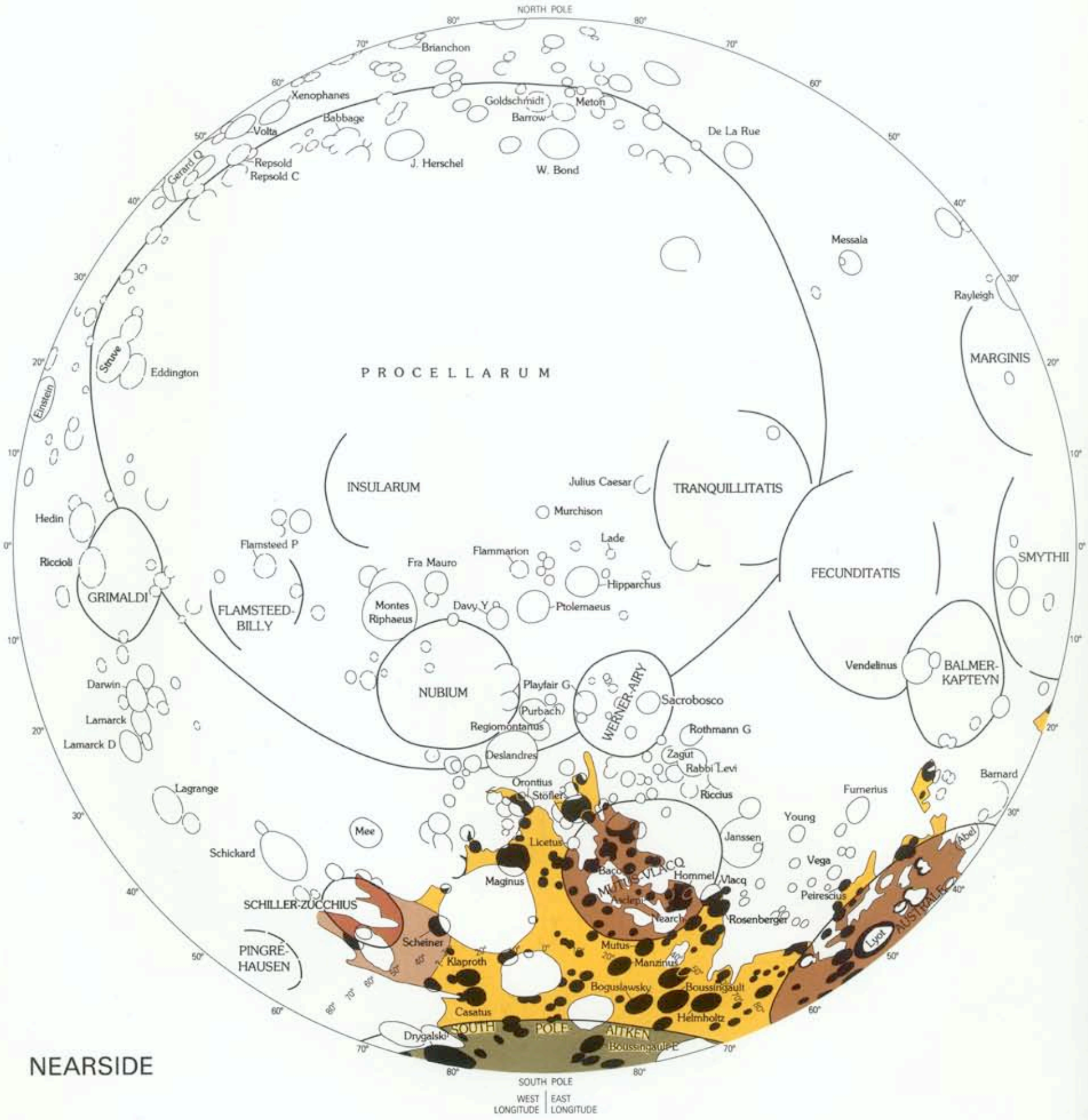
# PLATE 6. PRE-NECTARIAN SYSTEM




NEARSIDE

Nectarian and younger units

Interior Exterior
Basin materials, younger groups (6-9)

Basin interior materials, older groups (2-5)

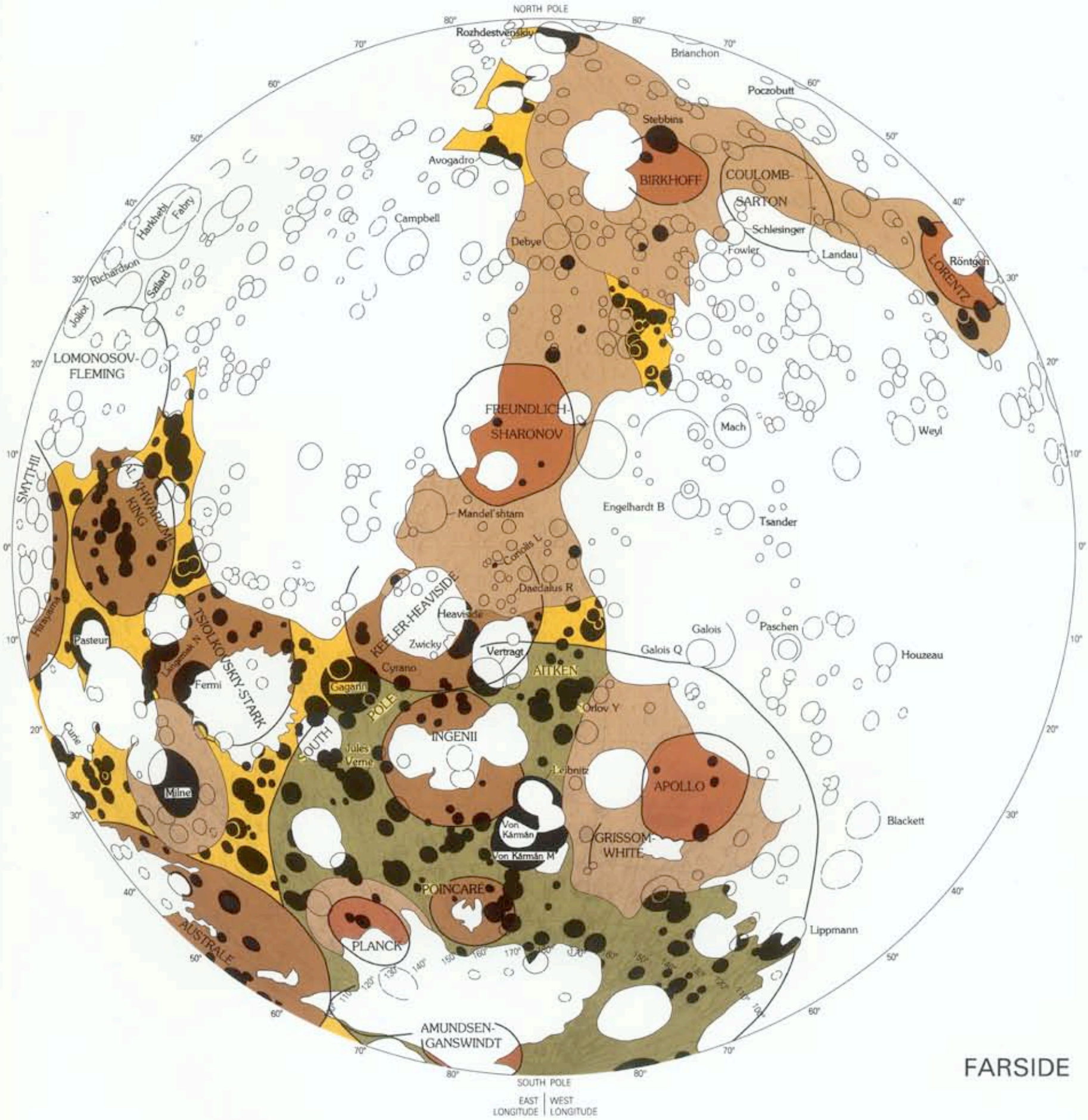
Interior materials of South Pole-Aitken basin

Crater interior materials

Intercrater terrane
Probably consists mostly of crater deposits and undetected basin deposits

Rim crest of buried crater
Dashed where possibly Nectarian

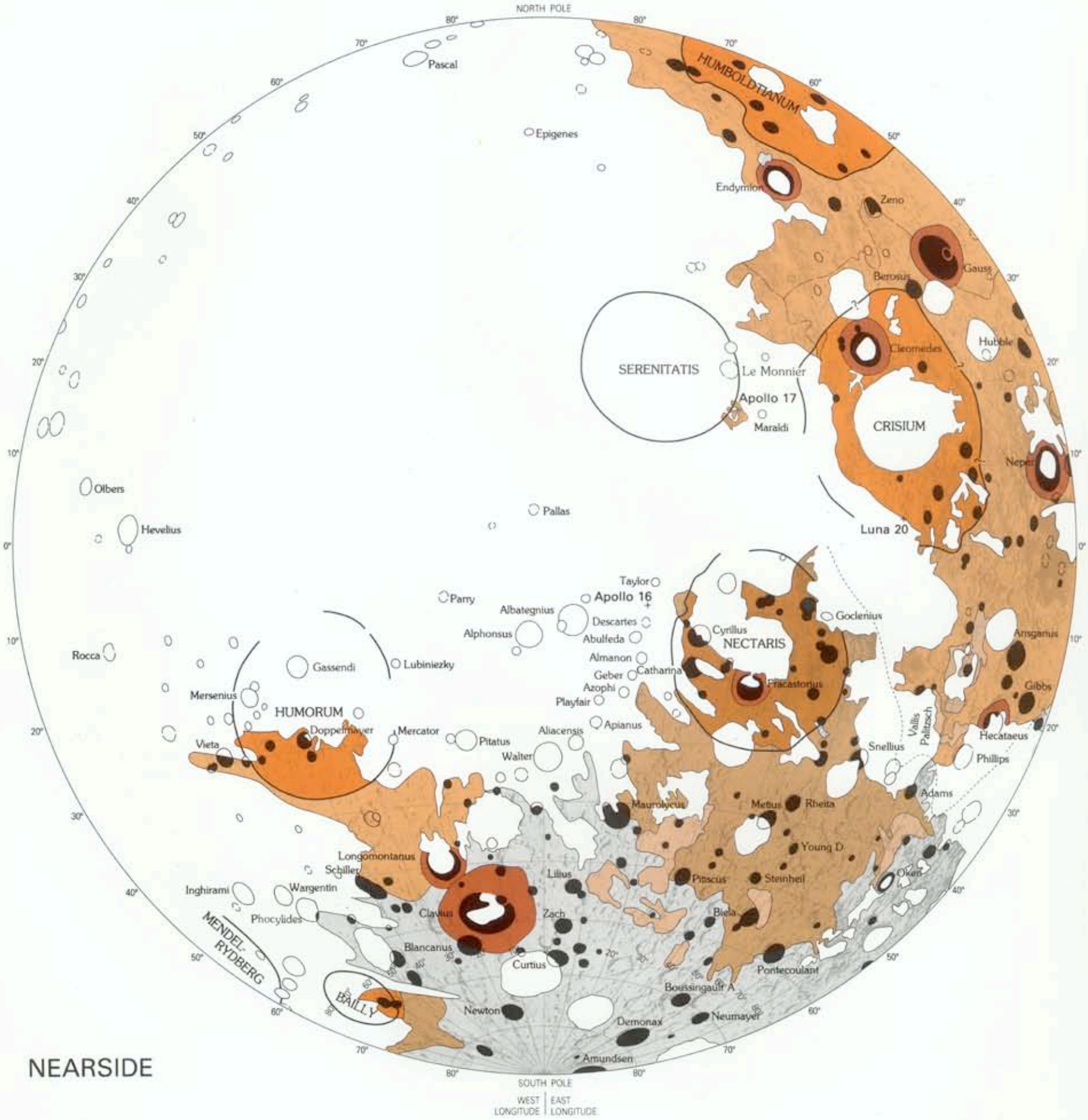
Basin rim




Plates 6-11 are paleogeologic maps that show units of the indicated age in color, older units only by the shaded-relief base, and younger units by blank areas. Exterior basin and crater deposits that are sufficiently well expressed to display stratigraphic relations with other units are mapped; divided where possible into near-rim deposits consisting of thick primary ejecta and outer discontinuous deposits including secondary craters and their ejecta, small patches of plains, terra-mantling material, and lineate ejecta. Craters >30 km in diameter are mapped; exterior deposits mapped around craters >120 km (pl. 7) or >60 km (pls. 8-11) in rim-crest diameter. Basin-interior materials (pls. 6-8) include massifs, knobby ejecta, and impact-melt plains. Number of superposed craters varies with age of underlying basin; number of visible buried craters varies with thickness of overlying deposit and with age of the substrate.

Shaded-relief base by J. L. Inge, U.S. Geological Survey; reproduced by courtesy of the National Geographic Society.

# PLATE 7. NECTARIAN SYSTEM




NEARSIDE

Post-Nectarian units

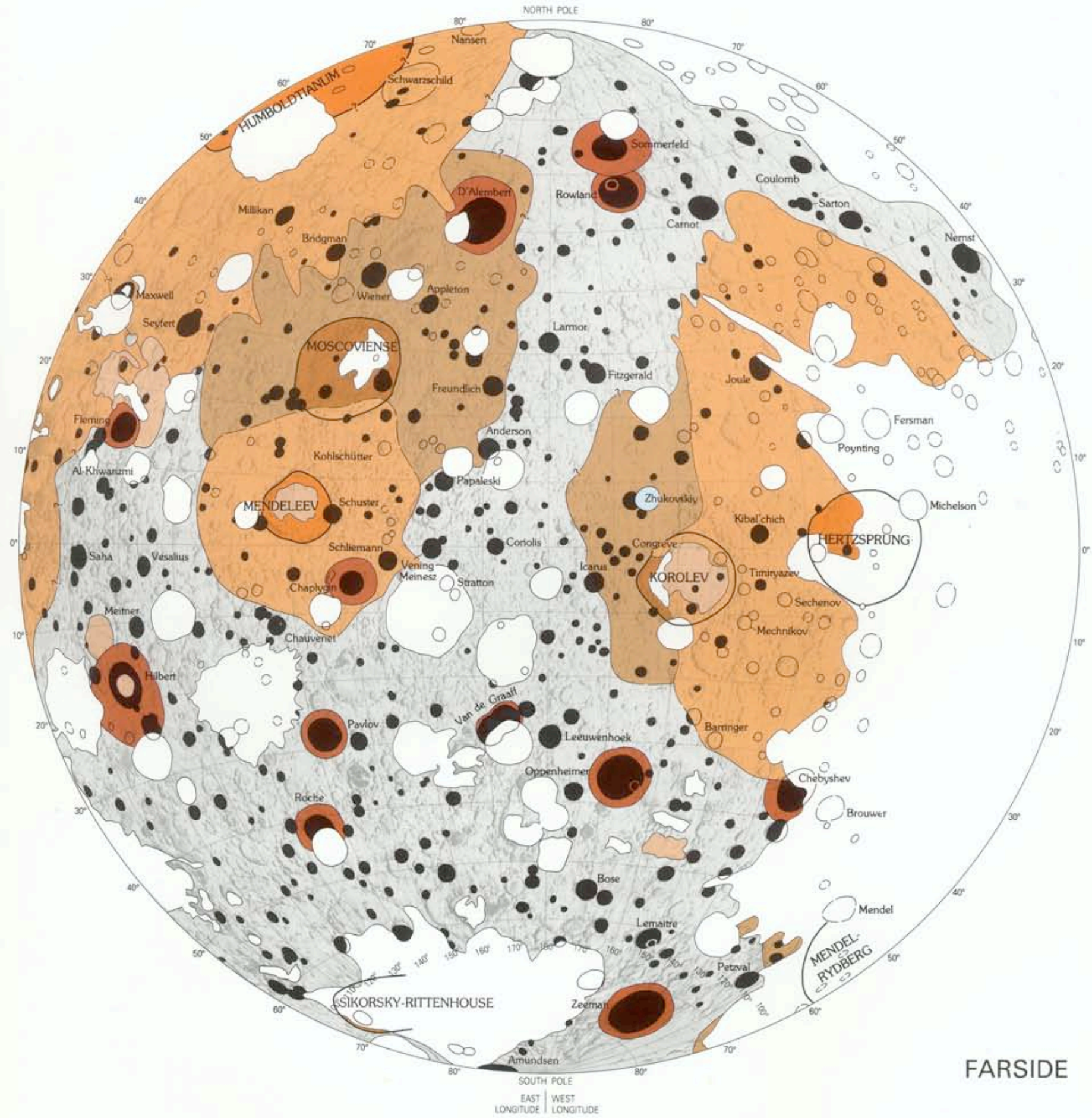
Interior Exterior
Basin materials, younger group

Interior Exterior
Basin materials, older group

Plains
May overlie Nectarian or pre-Nectarian volcanic deposits

Interior Exterior
Crater materials

Pre-Nectarian units



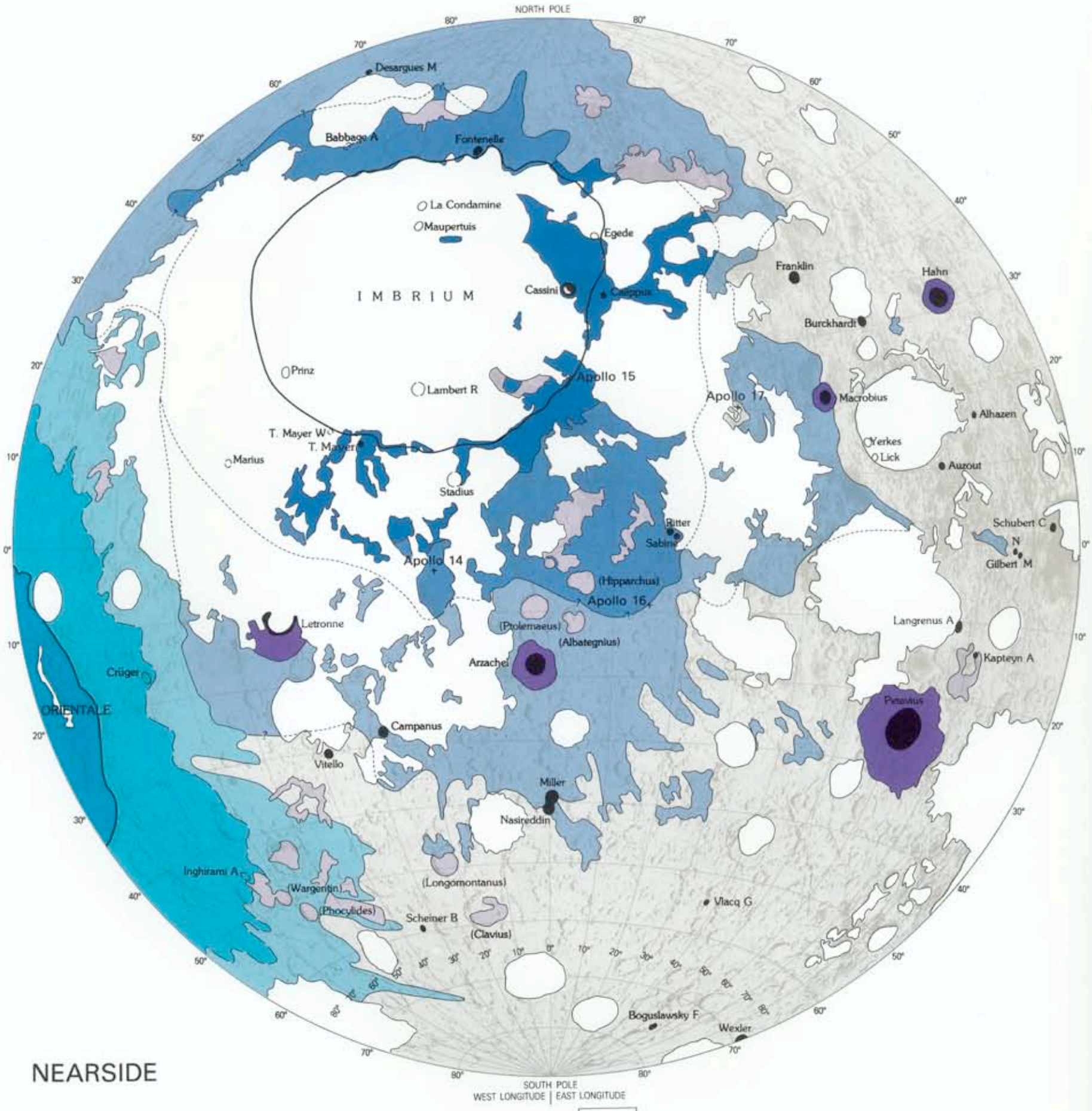

FARSIDE

Rim crest of buried crater
Dashed where possibly
pre-Nectarian or
Lower Imbrian

Basin rim

Shaded-relief base by J. L. Inge, U.S. Geological Survey; reproduced by courtesy of the National Geographic Society.

# PLATE 8. LOWER IMBRIAN SERIES




NEARSIDE

Post-Lower Imbrian units

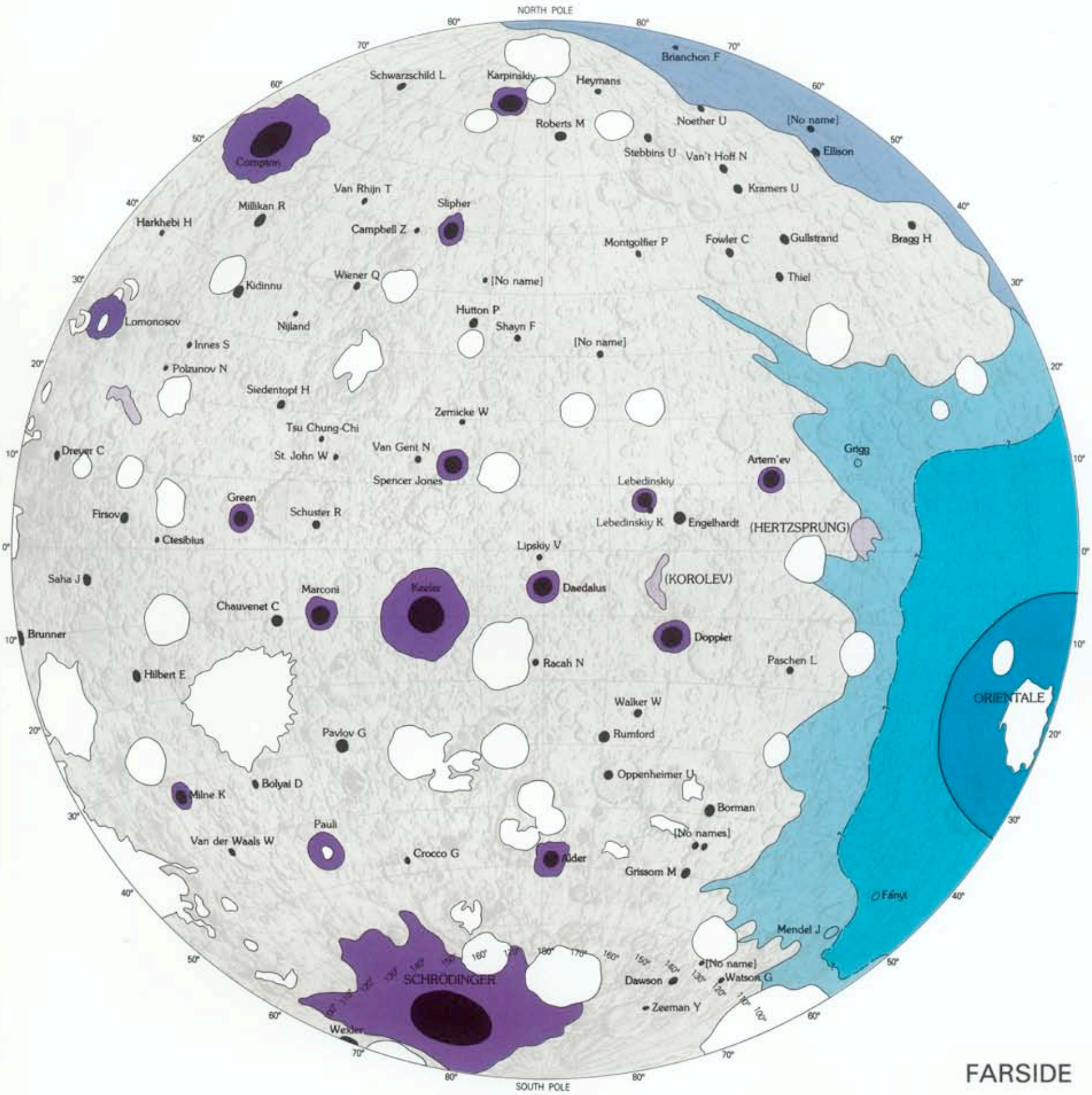
Plains
May overlie Nectarian or Lower Imbrian volcanic deposits

Montes Rook and Maunder Formations | Hevelius Formation (inner) | Outer deposits and secondary craters — Orientale basin materials

Interior | Exterior — Materials of craters and Schrödinger basin

Alpes Formation and material of Montes Apenninus | Fra Mauro Formation | Outer deposits and secondary craters — Imbrium basin materials

Pre-Imbrian units




FARSIDE

Rim crest of buried crater
Dashed where possibly Nectarian or Upper Imbrian

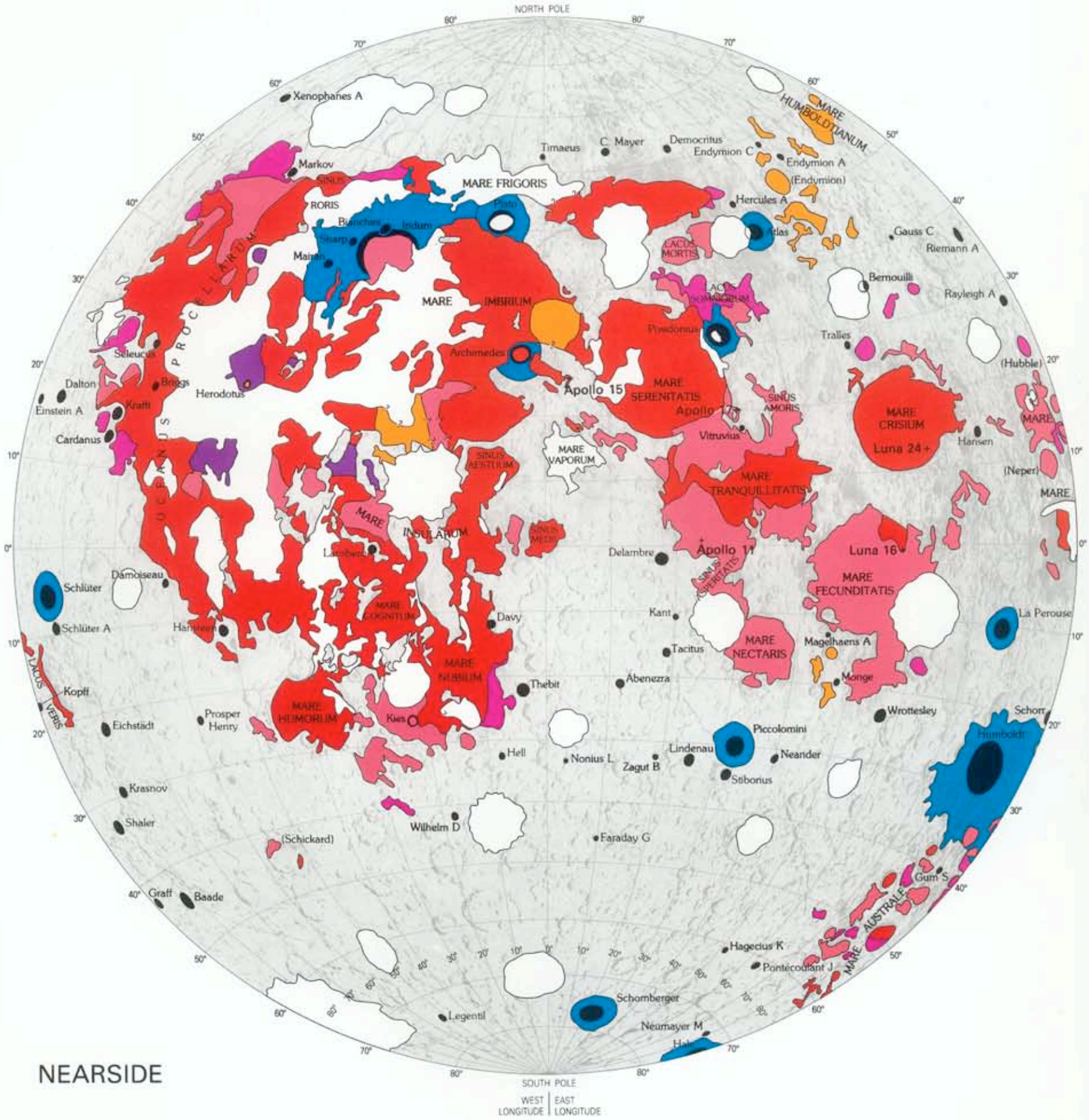
Basin rim

Buried contact
location inferred

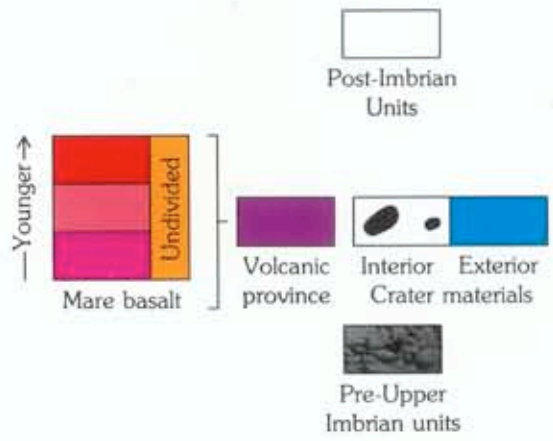
Note:
Pre-Imbrian basins (capitals) and craters (lowercase) containing otherwise unnamed plains patches are named in parentheses

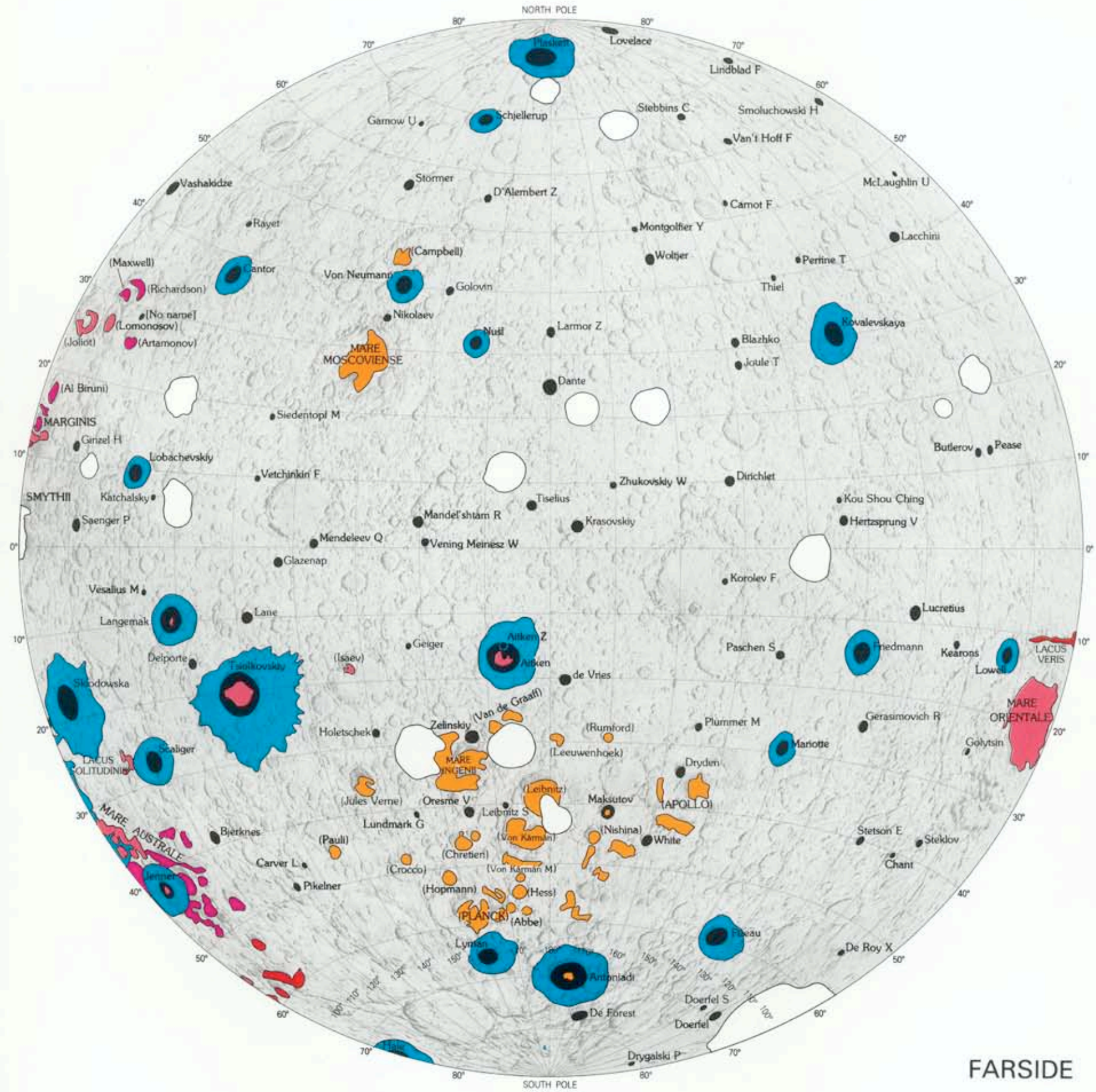
Shaded-relief base by J. L. Inge, U.S. Geological Survey; reproduced by courtesy of the National Geographic Society.

# PLATE 9. UPPER IMBRIAN SERIES




NEARSIDE





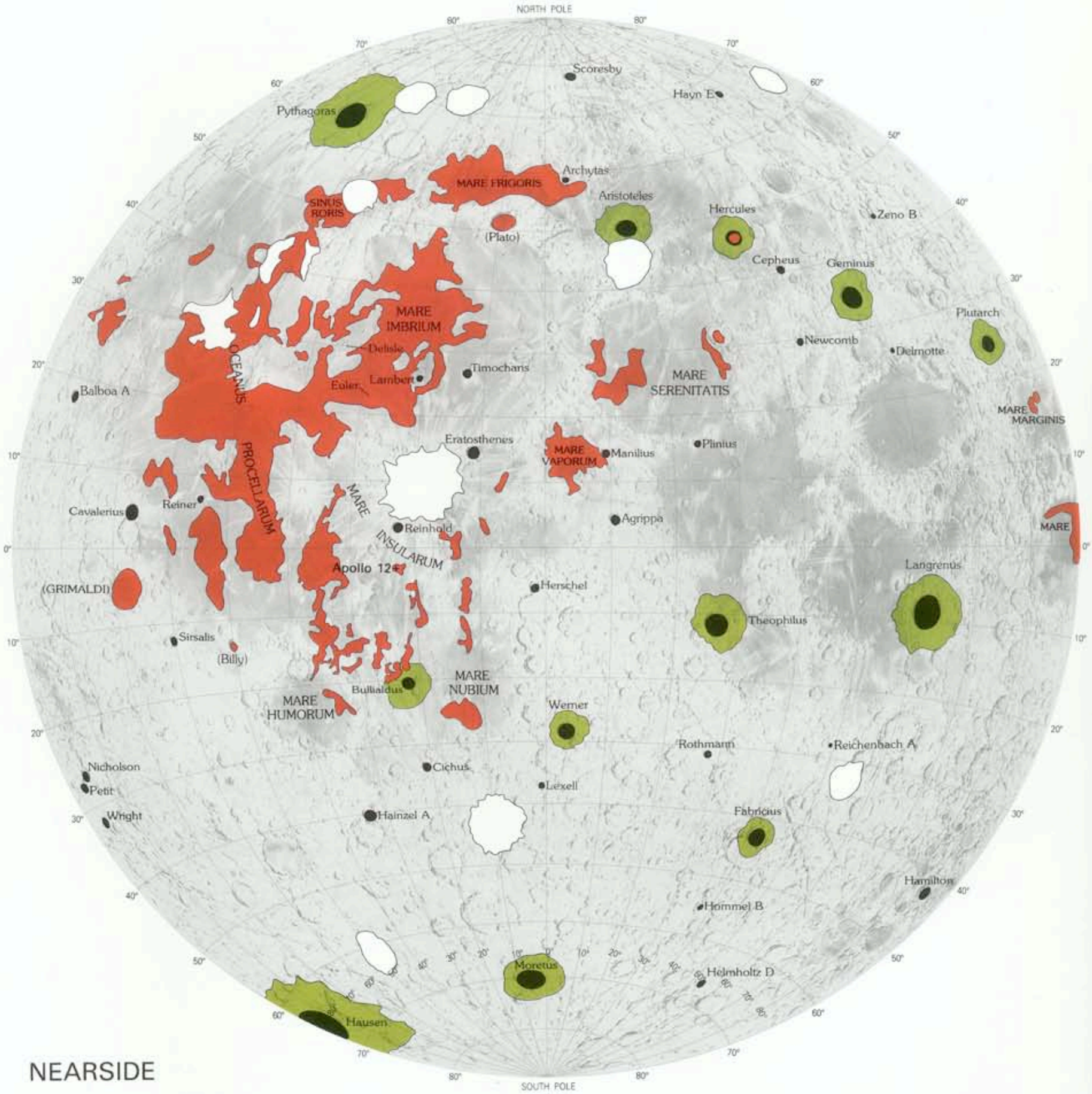

# FARSIDE

NOTE:

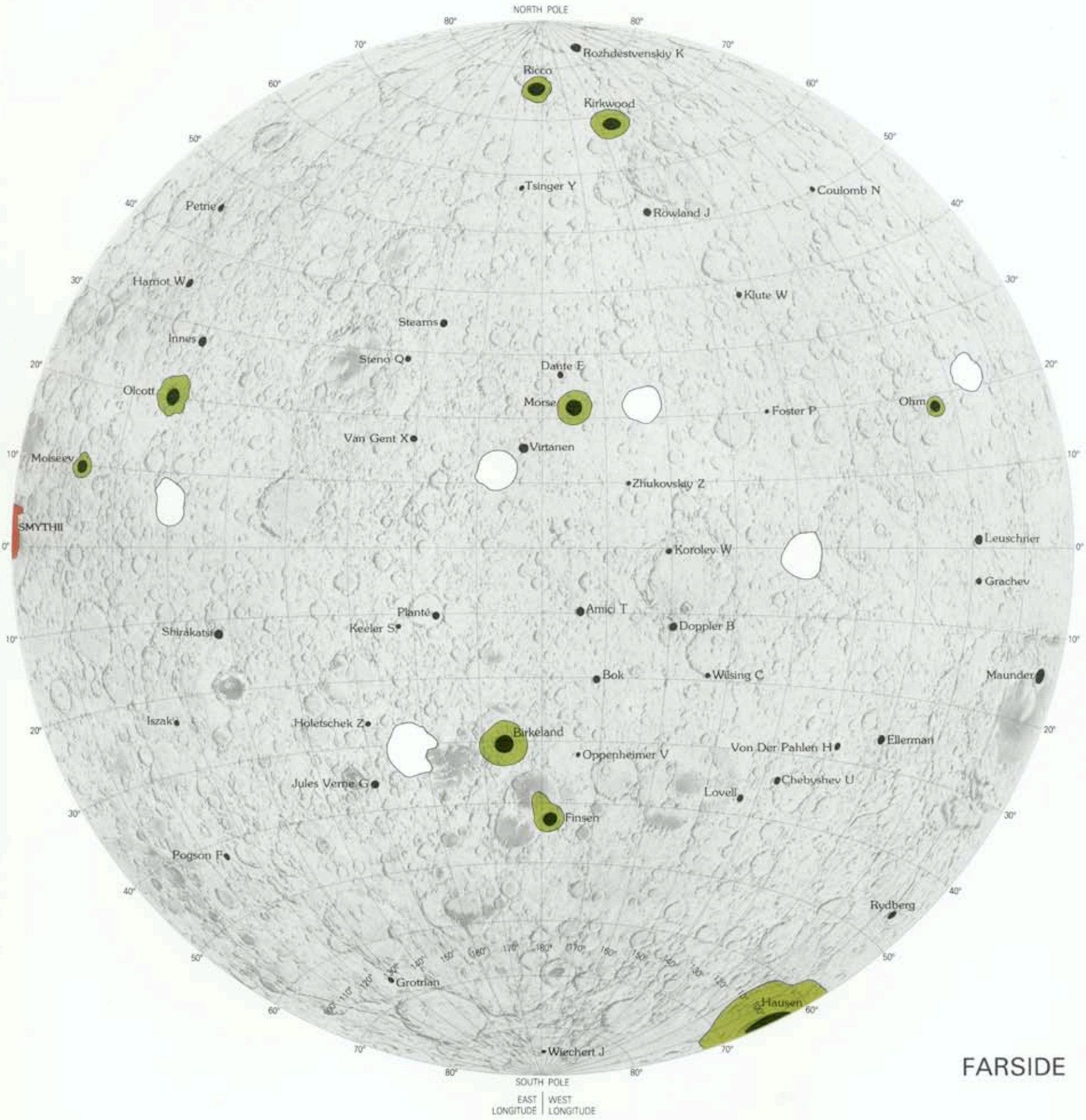
Mare mapping preliminary (pls. 9-12); contacts generalized from plate 4; small patches omitted; ages on central farside from Walker and El-Baz (1982). Volcanic provinces include numerous domes, cones, and dark-mantling deposits; other dark-mantling deposits are not shown (see pl. 4). Pre-Late Imbrian basins (capitals) and craters (lowercase) containing otherwise unnamed mare patches are named in parentheses

Shaded-relief base by J. L. Inge, U.S. Geological Survey; reproduced by courtesy of the National Geographic Society

# PLATE 10. ERATOSTHENIAN SYSTEM




NEARSIDE




# FARSIDE

Note:
Pre-Eratosthenian basins (capitals) and craters (lowercase) containing otherwise unnamed mare patches are named in parentheses

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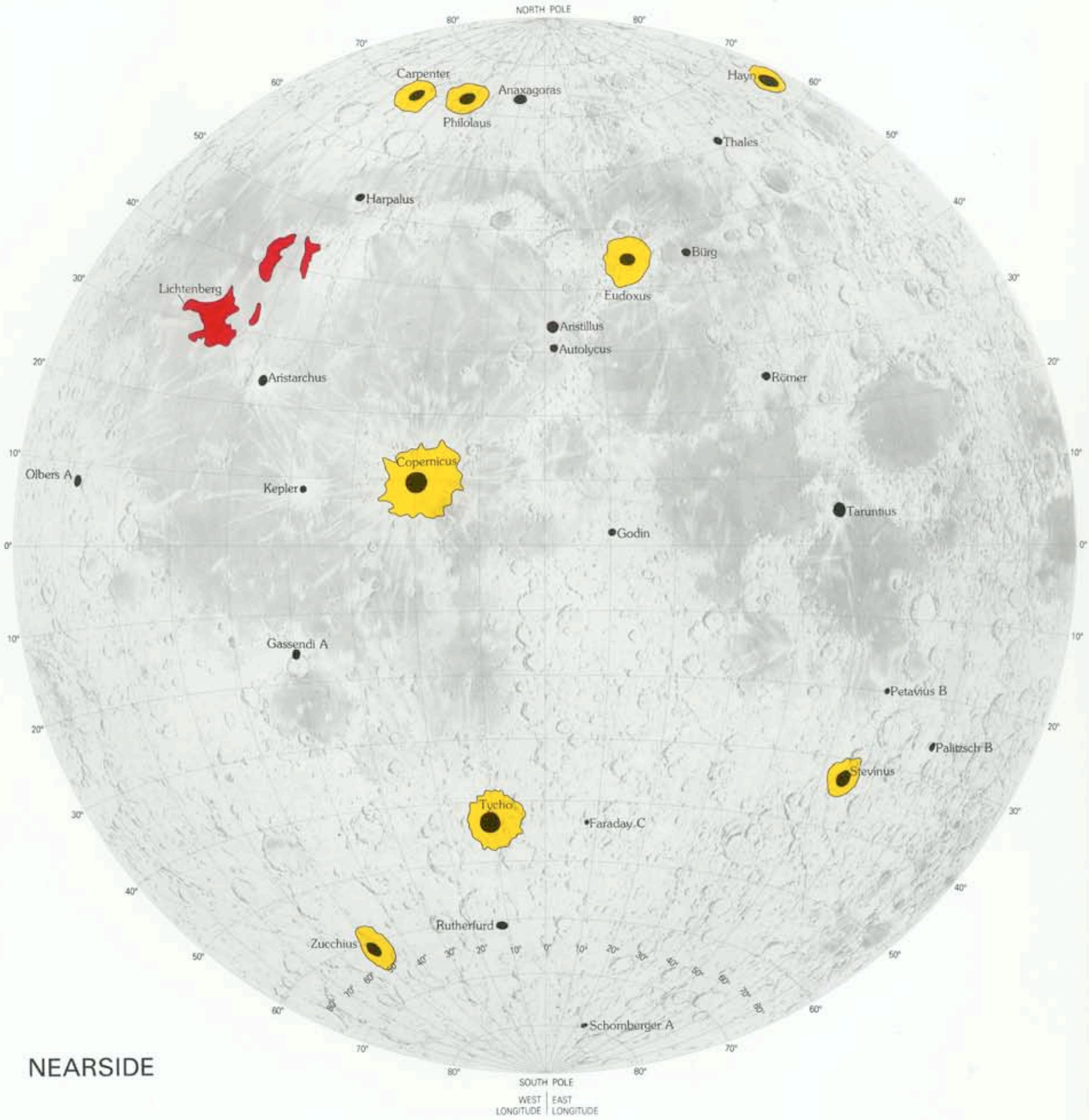
# PLATE 11. COPERNICAN SYSTEM



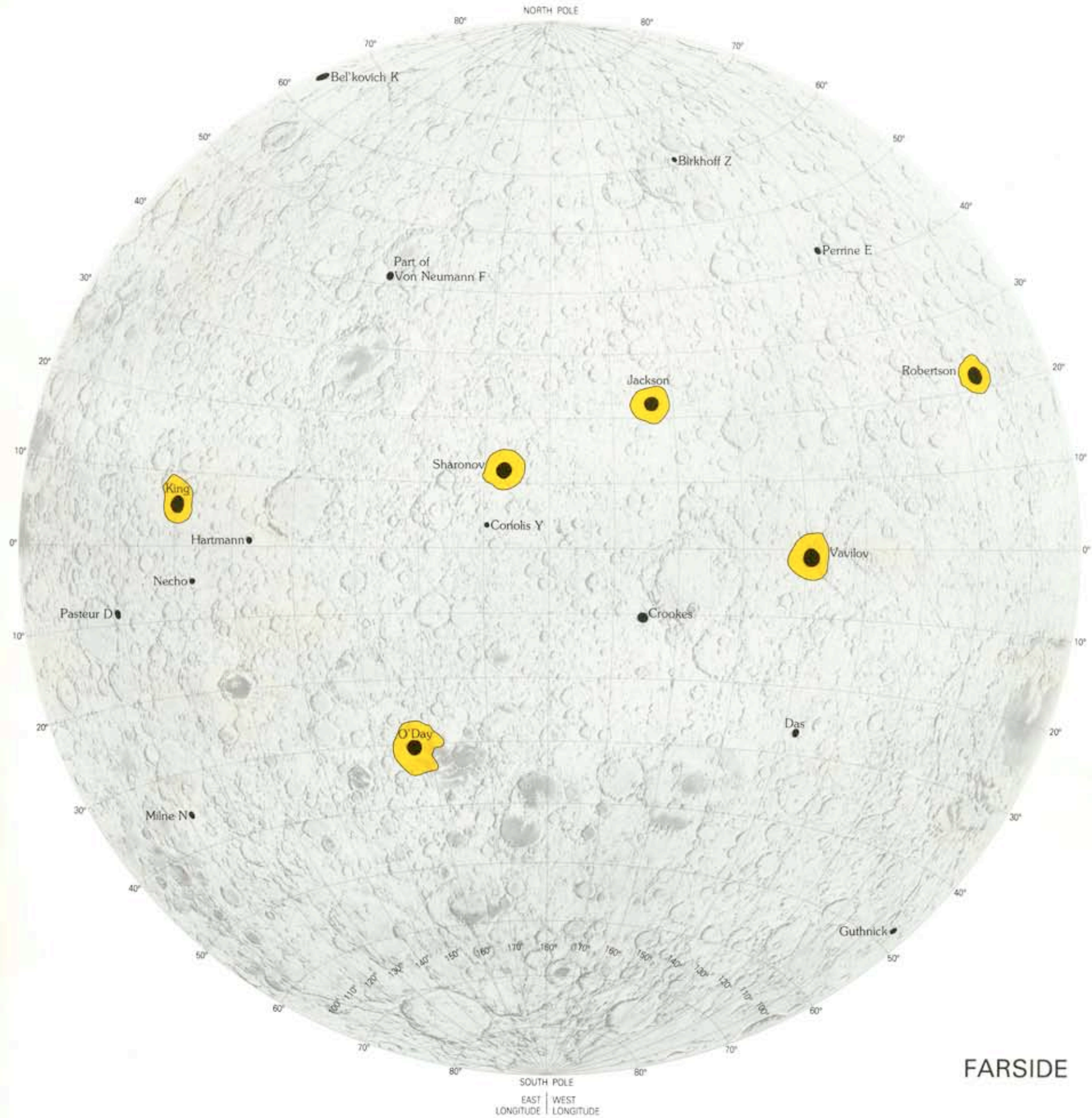

NEARSIDE

Mare basalt

Interior Crater materials

Exterior materials

Pre-Copernican units




# FARSIDE

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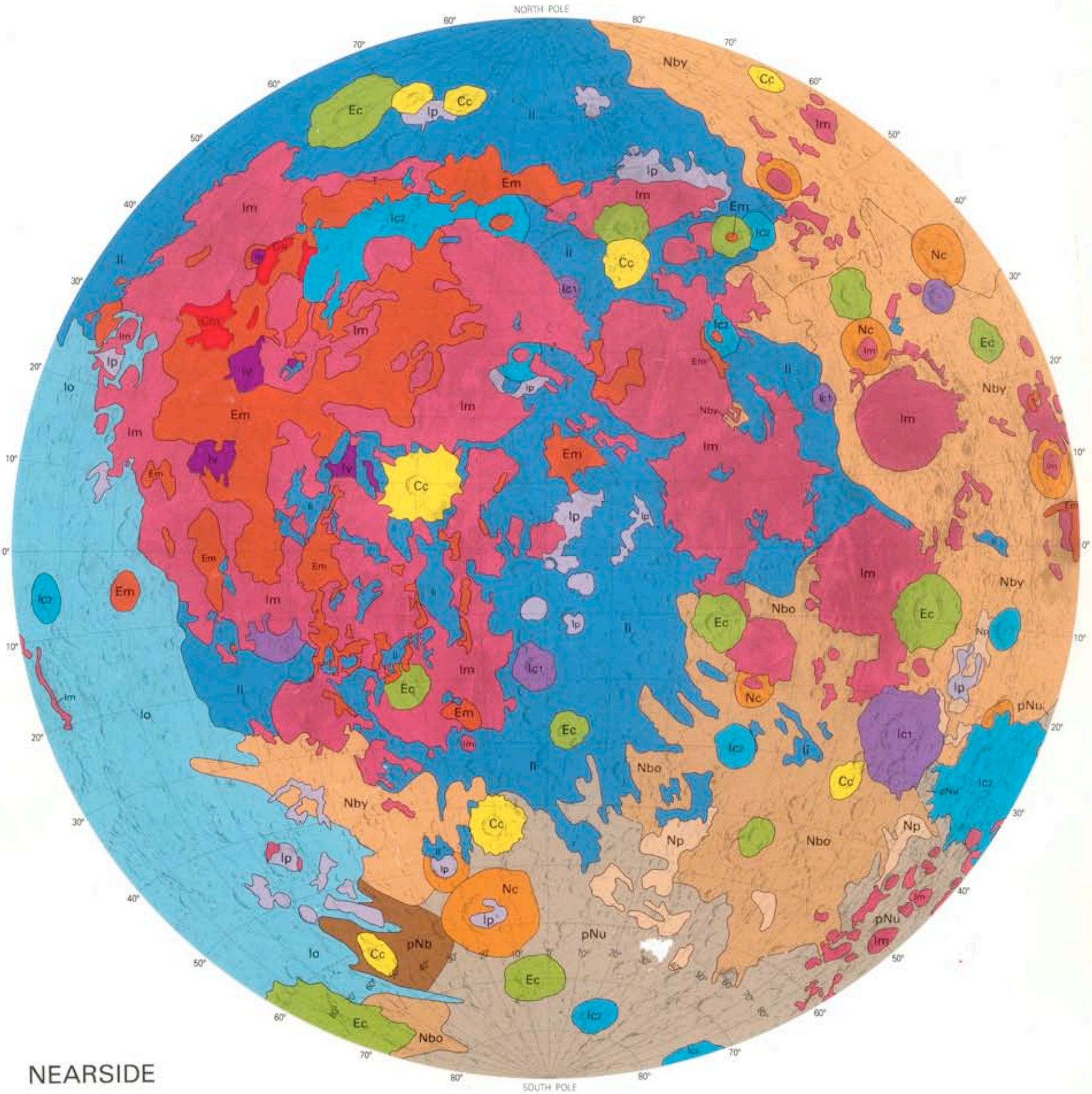
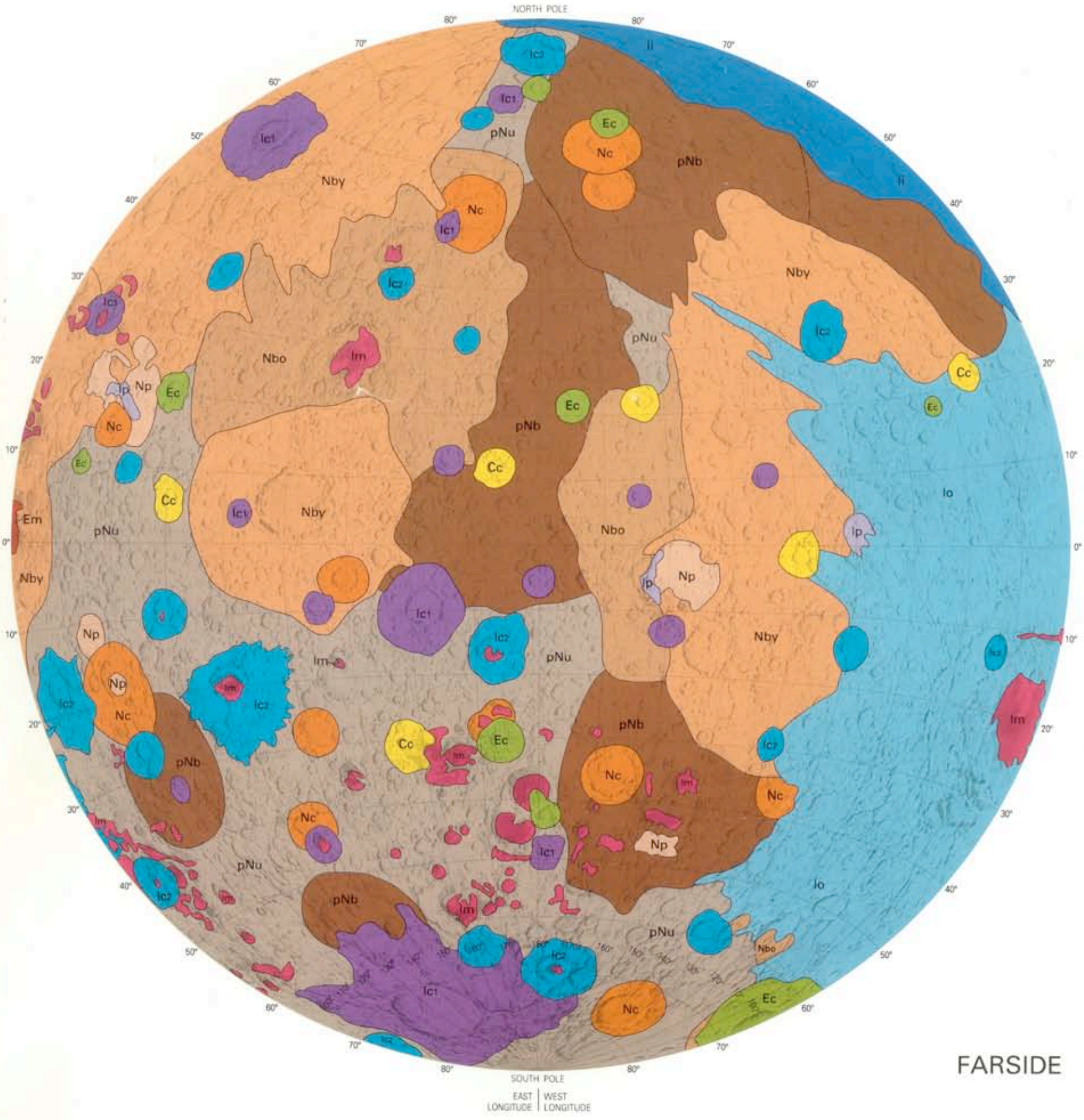
# PLATE 12. GEOLOGIC MAP OF THE PRESENT MOON




NEARSIDE

- Cm — Mare basalt
- Cc — Crater material — COPERNICAN SYSTEM
- Em — Mare basalt
- Ec — Crater material — ERATOSTHENIAN SYSTEM
- Im — Mare basalt; Iv — Volcanic province
- Ic2 — Crater material — Upper
- Io — Orientale-basin material
- Ic1 — Crater material (including Schrödinger basin)
- Ii — Imbrium-basin material — Lower — IMBRIAN SYSTEM
- Ip — Plains material
- Np — Plains material
- Nby — Younger basin material
- Nbo — Older basin material
- Nc — Crater material — NECTARIAN SYSTEM
- pNb — Basin material (including Milne)
- pNu — Undivided material — PRE-NECTARIAN SYSTEM




# FARSIDE

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