

# THE LUNAR OBSERVER

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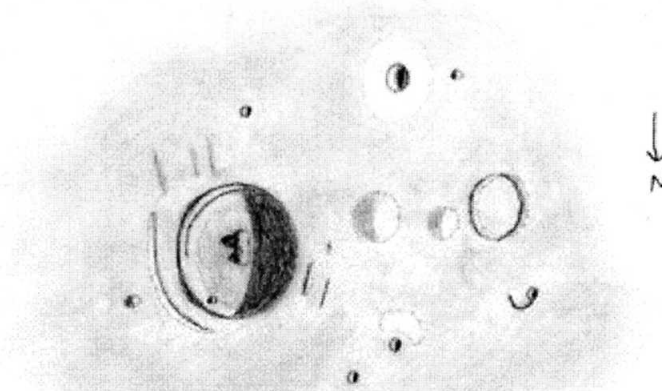
A MONTHLY NEWSLETTER FOR STUDENTS OF THE MOON .....DECEMBER 1998

EDITED BY: BILL DEMBOWSKI....219 OLD BEDFORD PIKE....WINDBER, PA 15963....DEMBOW@TWD.NET

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## FEATURE OF THE MONTH

Lansberg (0.3°S - 26.6°W)



Sketch by Robert H. Hays, Jr. - Worth, Illinois

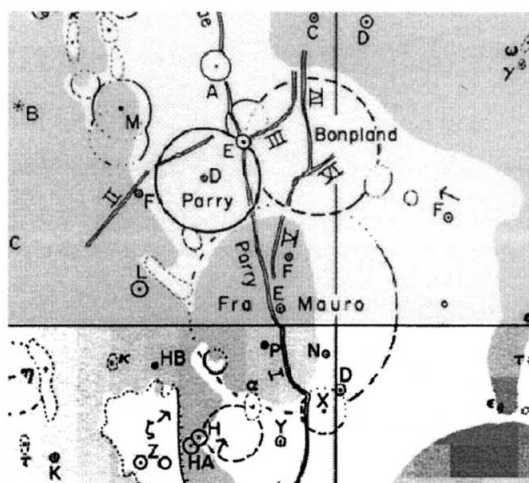
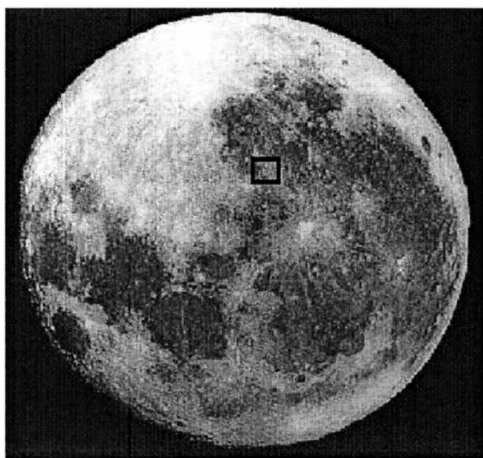
15cm Reflector - 170X - Seeing 8/10

Lansberg is a 39 km crater named for Phillippe van Lansberge (1561-1632), a Belgian physician and astronomer. On the morning of August 16, 1998, Robert H. Hays, Jr. sketched the area around Lansberg and submitted the following report:

"This large crater is on the lunar equator southwest of Copernicus and Reinhold. I observed this area on the morning of August 16, 1998, when I timed three occultations. This is a deep crater with a large, double central peak, the southern part being taller. The inside wall showed evidence of terracing. This crater seemed to be almost all depth; I saw little evidence of a raised rim. A narrow, curved rille was noted toward the east, near a small hill (Lansberg Alpha). The craters west of Lansberg were a study in contrast. Lansberg C was fairly large, but shallow, while Lansberg B toward the south was smaller but much deeper. North of Lansberg C was a small ghost ring with the south part missing, and a craterlet on its east end (Lansberg G and GA). Small craters were also seen to the northwest and south of Lansberg. I also noted what appeared to be two subtle, round domes between Lansberg and Lansberg C. These features merely had some gentle shading on the side away from the sun. Lansberg B also had a bright halo around it, and a small peak (Lansberg Tau) to its west."

Lansberg can be found on Map #42 of Rukl's Atlas of the Moon.

# EXPLORING THE MOON



Map used with permission of Lunar & Planetary Laboratory, University of Arizona

The subject of this month's exploration is an interesting cluster of three craters on the northeastern shore of Mare Cognitum. Beginning observers will learn a lesson in timing when they search for the trio because, in spite of their combined sizes (100 km x 160 km), their low profiles make them difficult to locate unless very close to the terminator. Begin your search nine days after New Moon.

The largest (95 km) and oldest of the trio is Fra Mauro. It is the northern most of the three and shares its northern wall with Parry and Bonpland. The floor of Fra Mauro is not a uniform shade which is probably the result of several different lava flows. The most noticeable albedo feature is a large dark patch in the northwest portion of the crater floor that has fingerlike projections toward the south. The floor also contains about eight craterlets in the 2-4 km range and a pair of parallel ridges on the west.

Bonpland (60 km) is the next largest and next oldest. It too has small craters and hills on its flooded floor. Parry (48 km) is the smallest and youngest of the trio and has the most complete walls. On Parry's southwest wall look for Parry E, a 7 km crater that is the focal point for a nice system of rilles.

It is the rilles that make this area so interesting. A major rille starts in the north of Fra Mauro and splits in two about two-thirds of the way through the crater. The west fork passes through Bonpland while the east fork cuts through Parry. In both cases the rille can be followed through the walls of the respective craters. Additional, finer rilles can be found in all three craters by more experienced observers. Look also for a sprinkling of bright spots and patches that appear as the sun climbs higher in the lunar sky.

As always, your sketches, images, and notes from this exploration are welcomed and encouraged.

## OBSERVATIONS RECEIVED DURING THE MONTH

ROBERT H. HAYS, JR. - WORTH, ILLINOIS

.....Sketches of Lansberg, Straight Wall, Mons Piton, and Gruithuisen

.....Timings of 79 stars occulted by the Moon

MICHAEL MATTEI - LITTLETON, MASSACHUSETTS

.....CCD images of Kies and Copernicus

## From the Editor:

Colin Ebdon of the British Astronomical Association has proposed a project to catalog, map, and study the bright lunar rays. If enough interest can be generated it could be turned into a joint venture of the B.A.A. and the A.L.P.O. This project offers not only an opportunity to add to our knowledge of these fascinating features (keep in mind that they do not show well on orbiter images because of the low sun angles) but it also provides something to observe away from the terminator, especially at Full Moon. This is an excellent opportunity to get in on the ground floor of a long term international project. Anyone who is interested please contact me at the address shown in the banner on Page One.

If all goes well, the next issue of the A.L.P.O. Journal will feature the first in a series of articles I am writing entitled "Observing the Moon". The subject of the first installment is "Rilles", and includes illustrations by Colin Ebdon (London, England), Robert Hays, Jr. (Worth, Illinois), David Lehman (Fresno, California), and Donald Parker (Coral Gables, Florida). The subject of the second installment is scheduled to be "Lunar Rays" (a coincidence, I swear). Images of lunar rays by amateur astronomers are rather scarce, so if anyone has suitable sketches, photographs, or CCD images please send them to the address on Page One. You will be doing me a big favor and you just might see your work in the Journal.

Clear and steady skies ..... WMD

## LUNAR CALENDAR - DECEMBER 1998 (UT)

2.....	12:00.....	Moon at Perigee (358,832 km)
3.....	15:20... ..	Full Moon
9.....	06:00.....	Moon Occults Regulus (Atlantic Ocean)
10.....	17:54.....	Last Quarter
12.....	09:00.....	Moon 1.7 Degrees North of Mars
14.....	17:00.....	Moon at Apogee (405,746 km)
17.....	01:00.....	Moon 2.5 Degrees North of Mercury
18.....	22:43.....	New Moon (Start of Lunation 940)
22.....	10:00.....	Moon 1.8 Degrees North of Uranus
25.....	11:00.....	Moon 1.1 Degrees South of Jupiter
26.....	10:46.....	First Quarter
28.....	00:00.....	Moon 2.0 Degrees South of Saturn
30.....	18:00.....	Moon at Perigee (363,773 km)
30.....	23:00.....	Moon Occults Aldebaran (North America)

## Question of the Month:

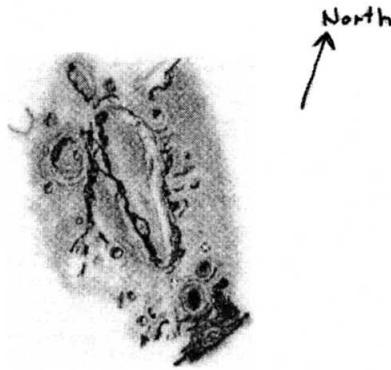
Q: What is the apparent speed of the Moon as it moves across the sky?

A: The Moon appears to move westward its own diameter (1/2 degree) every two minutes.

# TOPOGRAPHICAL STUDIES



REGION SW OF CASATUS - Sketch by Colin Ebdon - London, England  
August 6, 1998 - 25cm Newtonian - 183X - Seeing III (Antoniadi)



SCHILLER - Sketch by David J. Lehman - Fresno, California  
June 6, 1998 - 15cm Newtonian - 168X - Seeing 4/10



KIES AND DOME - CCD image by Michael Mattei - Littleton, Massachusetts  
September 1, 1998 - 15cm Schupman - Cookbook 211 CCD Camera