PHOTOELECTRIC RESULTS OF THE TOTAL LUNAR ECLIPSE OF APRIL 12-13,1968.

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According to an observational program of all lunar eclipses visible from La Plata, it was photoelectrically measured an area of the Mare Crisium during the total eclipse of April 12-13,1968.

The measures were made in the VRI system (visual, red a infra red) with the photoelectric photometer NSF attached to the 80 cm reflector of the La Plata Observatory. It was employed the photomultiplier RCA 7102 with standard filters, all of them used for stellar work. The diaphragm had 7" of diameter. A DC integrator was employed and only the integration time and the resistors steps were changed as the light received on the photomultiplier was varying.

Four standard stars (Johnson et al, 1966) were observed after the eclipse had finished to convert the instrumental system to the standard VRI system. The extinction coefficients were obtained the following night.

The results show that the values of the magnitude R and the colors R-I and V-I of Mare Crisium between simetrical points from the center of the umbra were different: brighter after the third contact than before the second contact. It is assumed that this was due to a large effect of scattered light, as something in the baffle system was perhaps in a wrong position. The only values which we think to be dependable are those obtained between 4^h45^m and 5^h04^m UT, because at this time it was measured the scattered light. The mean of these values, which are the darkest of all the observations, and corrected by diffuse light are:

$$R = 12.51\ m/''^2;\ R-I = 1^m.64\ ;\ V-I = 3^m.97.$$

At this moment, 4^h55^m UT the distance of Mare Crisium to the center of the umbra had its smallest value, that is 23'.

The correction of the observed magnitude per square second to the integrated magnitude for all the Moon is -16.10, so its magnitude at mid-eclipse in the three wave lenghts bands are:

$V_t = -1^m.26$; $R = -3^m.59$; $I = -5^m.23$

The result of the integrated magnitude $V_t = -1^m.26$ means a quite bright eclipse as compared with the total lunar eclipse of June 24-25,1964, which gave at 23' from the center of the umbra $V_t = +1.0$ (Feinstein, 1966).

According to visual observations reported in the Sky and Telescope (1968) it was obtained $V_t = -2.2$, and with photoelectric observations $V_t = -3.0$. These values slightly disagree with our observations, but as it was easily seen with naked eye the southern region of the Moon was very bright when it was inside the umbra, and that was nearly the border with the penumbra. Then the integrated magnitude has to be more negative.

REFERENCES

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CONTRIBUCION AL ESTUDIO DE ESTRUCTURA GALACTICA A BAJAS LATITUDES

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Con el telescopio de 30 metros del Instituto Argentino de Radioastronomía y utilizando un receptor de 56 canales se hicieron observaciones en la línea de 21 cm. del hidrógeno neutro en la región de longitudes galácticas entre 302° y 310° y de latitudes galácticas entre 2° y 12°. Fueron tomados puntos cada 0°,5 tanto en longitud como en latitud. Los perfiles obtenidos constan de puntos cada 2 Km/s con el rango -100 a + 100 Km/s.

El análisis general de las observaciones revela que la densidad del hidrógeno decrece con mayores latitudes hasta aproximadamente b=4°,5.

A partir de ese valor se constató que la densidad sufre un incremento. Se estudian las características generales que surgen en esta región del cielo así como también las concentraciones ais-