

Beobachtung der Mondfinsterniss vom 17. Januar 1870.

The lunar eclipse of the 17th instant was remarkably well seen here. The moon was overspread with very thin filmy cloud till about 11^h43^m, but the diminution of her brilliancy from that cause was very slight. She remained unclouded during the rest of the phenomenon. No decided defalcation of light was noticed on the eastern limb till 10^h41^m, but at 10^h52^m, the effects of the penumbra were very marked. The following are the local mean times of the different phases as near as they could be observed it being a most difficult matter to fix the precise instants of the contacts owing to the ill-defined character of the shadow

First contact with the shadow...	17 ^d 11 ^h 1 ^m 19 ^s
Beginning of the total phase....	= 12 0 29
End of the total phase.....	= 13 38 53
Last contact with the shadow...	= 14 38 58

Star.	Mag.	Phase.	Mean Time.
<i>a</i>	7	Disappearance	11 ^h 59 ^m 24 ^s .7
<i>b</i>	8½	=	12 49,4
<i>c</i>	8	=	13 2 19,3
<i>d</i>	8	=	13 5 0,2
<i>e</i>	8	Reappearance	13 6 18,7
<i>a</i>	7	=	13 25 4,2
<i>f</i>	7	Disappearance	13 36 24,2

The noted time of the reappearance of the star *a*, owing to a temporary removal of the eye from the telescope, was probably two or three seconds late. The moon's disc was of a copper hue throughout the total phase, and continued distinctly visible both to the naked eye and in the telescope. The southern limb was remarkably bright at the middle of the eclipse. The meridian transit of the first limb was pretty well observed, but the second limb was too faint.

At 11^h29^m the shadow assumed a light copper tint, except at its periphery where it was of a very dark green. The copper tint, as seen in the telescope, appeared to extend even to the filmy cloud which lay along the moon's eastern limb. At 11^h43^m when the moon shone unclouded, the details on the obscured portion of the lunar surface began to be perceptible in the telescope. These became gradually more distinct, and it was soon observed that the dark body of the moon was surrounded by numerous telescopic stars, and that many occultations would occur during the total phase. Several of these phenomena were observed with tolerable accuracy: some of the stars, however, were too faint for accurate observation. The following occultations were recorded:

Remarks.
disappearance sudden. (approx.)
disappearances near upper limb: a little uncertain. (approx.)
uncertain to a second owing to increasing brightness of limb.

The copper and dark green tints were again observed after the total phase, that portion of the obscured surface next to the center of the shadow being copper tinted; and the outline of the shadow being very dark green. The telescopic observations during the eclipse were all made with my refractor of 3¼ inches aperture and 48 inches focal length, furnished with a magnifying power of about 30.

Windsor, N. S. Wales, 1870 Jan. 26th. *J. Tebbutt junr.*

Schreiben des Herrn Commodore *B. F. Sands* an den Herausgeber.

I have the pleasure of transmitting to you some observations of the stars of comparison observed with the planet *Felicitas*, (109). The observations were made by Professor *Safford* of the Dearborn Observatory at Chicago, with his new *Repsold* Meridian Circle. The following is an extract from Professor *Safford's* letter:

„The following are places of some stars I have observed with our Meridian Circle; among them are some used at the U. S. Naval Observatory to compare with *Felicitas*, (109).“

U. S. Naval Observatory, Washington, 1870 March 19th.

α	δ	N ^o of Obs.
0 ^h 30 ^m 33 ^s .03	+10° 43' 15".6	2
32 54,48	10 49 4,4	2
35 26,66	10 6 21,0	1
40 2,19	9 51 49,3	3
43 47,62	9 42 11,7	2
50 21,26	9 43 42,3	4.3
56 21,15	9 37 55,6	2
1 1 19,16	14 25 50,2	1
3 56,25	14 43 13,5	1
7 22,32	+15 16 26,0	1*)

*) Star faint, 2 wires only obtained for AR. These however agree well. Probable error of observation ±0".062, ±0".61.“

B. F. Sands,
Commodore, U. S. N., Superintendent.