On the Determination of the Zero of a Position-circle.

In measuring the position-angles of double stars and of the satellites of planets with a filar micrometer some time is always occupied in determining the error of the zero of the position-circle. This is commonly done by adjusting the position-wires parallel to the motion of an equatorial star. It has occurred to me that this determination can be made in the following manner. Set the equatorial in the meridian with its collimation axis approximately horizontal. Place a small spirit level upon one edge of the rectangular frame which contains the wires and bringing the bubble to the centre of its tube read the position-circle. Reverse the level and repeat the observation. The mean of these two readings of the position-circle will then be either the required zero or its corresponding parallel. If on account of instrumental errors the zero thus found does not agree with the one furnished by observations taken in the ordinary way, the difference between them may

be easily determined and applied. The use of this method would be facilitated if micrometers were constructed with two small projections added to the rectangular frame in such a manner that a level could be hung upon them.

The following are four observations made in the foregoing manner at this observatory.

Date	Zero of Circle
1879 Aug. 29.8	175°46'
" 31.8	175.46
Sept. 6.0	175.46
" 8.0	175.46

These results show that the zero is practically constant for short intervals of time, and consequently its value may be found in the daytime; the increase of accuracy over the usual method is also apparent.

Cincinnati Observatory, Sept. 16, 1879.

H. A. Howe.

Entdeckungen neuer Planeten.

(204), entdeckt von *Palisa*, October 8. Grösse 12.

			α	δ
1879 Oct. 8	10 ^h 54 ^m 25 ^s	m. Zt. Pola	2 ^h 1 ^m 22 ^s 46	+12° 8' 14" 2
" 11	9. 7. 5	"	1.59. 4.63	+11.48.18.8

(205), entdeckt von *Palisa*, October 13. Grösse 12.

			α	δ
1879 Oct. 13	11 ^h 22 ^m 23 ^s	m. Zt. Pola	2 ^h 5 ^m 33 ^s 26	+13°46' 29" 3
" 16	13.35	m. Zt. Berlin	2. 3.13	+13.23.3

(206), entdeckt von *C. H. F. Peters*, October 15. Grösse 11.

1879 Oct. 15	$\alpha = 1^{\text{h}}0^{\text{m}}$	$\delta = + 1^{\circ}20'$		
			α	δ
" 15	12 ^h 0 ^m	m. Zt. Berlin	0 ^h 59 ^m 21 ^s	+ 1°15' 2
" 16	9.41	"	0.58.36	+ 1.10.3
" 16	11.49	m. Zt. Leipzig	0.58.31	+ 1.10.0

(207), entdeckt von *Palisa* October 17. Grösse 12.

1879 Oct. 17	$\alpha = 2^{\text{h}}18^{\text{m}}52^{\text{s}}$	$\delta = + 14^{\circ}13'$	Tägl. Bew.	— 1 ^m 4 ^s	— 5'
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(208), entdeckt von *Palisa* October 21. Grösse 13.

1879 Oct. 21	$\alpha = 2^{\text{h}}20^{\text{m}}32^{\text{s}}$	$\delta = + 15^{\circ}24'$	Tägl. Bew.	— 48 ^s	— 4'
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Notiz.

Die in Nr. 2272 der A. N. mitgetheilte Ephemeride für die Lage der Marsaxe und die auf die Berechnung der Phase bezüglichen Hilfswinkel gilt für den Greenwicher Mittag.

Strassburg 1879, October 12.

Ernst Hartwig.