We may apply these formulas to the case of an objective of Cr. 1219 and Fl. 1237 which I have calculated with the constants:

$$r_1 = \quad 673.10 \atop r_2 = \quad 300.91 \Bigg\} \text{ thickness } 10$$

$$r_1' = -\;309.16 \atop r_2' = \quad 1306.4 \Bigg\} \quad\quad \text{ » } \quad\quad 5$$

Lenses in contact. $F = 1066.23$ for wave-length 5614;

whence:

$$A = \quad 0.004809 \quad \frac{dn}{dt} = 105 \ (10^{-9})$$

$$A = -\;0.002469 \quad \frac{dn'}{dt} = 5397 \ (10^{-9})$$

We may also assume with Prof. Sundell that

$$\alpha = \alpha' = 84 \ (10^{-7}) .$$

then

1) $\dfrac{dF}{F} = +0.0000137$ for $1°\,C$

2) $\dfrac{dF}{F} = +0.0000084$ » »

and the value of the total increment is

$$0.0000221.$$

Prof. Sundell found experimentally 0.0000217 while his theory gave 0.0000263. It is singular that a theory which implies a variation in refractive index exactly opposite to the true one should yield a result so near, but it is owing to the extraordinary difference of crown and flint glasses in respect to change by temperature.

Charles S. Hastings.
Johns Hopkins Univ. Baltimore.

Schreiben von Prof. Lewis Swift an den Herausgeber.

I desire in as public a manner as possible to do justice to Mr. W. R. Brooks of Phelps N. Y. regarding the priority of discovery of the new comet in Pegasus, detected almost simultaneously by him and myself. It was probably cabled as having been found by me, if so I wish to say that having investigated the facts, I am free to acknowledge that he antedates me by about 15 minutes. The honor therefore is justly his due.

Slight changes being in process in the machinery for opening and closing the shutter to the dome of this observatory, I was unable to use the 16 inch refractor and was in consequence compelled to estimate as heretofore the comets position, my comet seeker having no circles.

Warner Observatory, Rochester, N. Y. 1883 Febr. 26.

Lewis Swift.

On Mr. Finlay's pre-perihelion observations of the Great Comet 1882 II.

[Communicated by Her Majesty's Astronomer at the Cape.]

The following are the results of Mr. Finlay's observations made on the morning on which he first saw the comet, and on the following day. They are I believe the earliest exact observations of this remarkable body.

1882	M. T. Cape	R. A.	f. p.	Obs.	N. P. D.	f. p.	Obs.
Sept. 7	$17^h 23^m 15^s7$	$9^h 31^m 44^s54$	—0.054	14	—	—	—
7	17 26 5.3	—	—	—	$90° 59' 49''3$	+0.551	8
8	17 20 10.5	9 40 2.14	—0.054	5	—	—	—
8	17 27 16.7	—	—	—	90 56 22.8	+0.552	5

The following are the mean places for 1882.0 of the comparison stars, derived from recent observations with the Transit circle.

1882	Star	RA. 1882.0	Corr.	N. P. D. 1882.0	Corr.
For Sept. 7	DM. — $0°2229$	$9^h 32^m 11^s78$	+ 1^s82	$90° 56' 40''57$	+ $10''71$
» 8	» — $0°2256$	9 44 23.16	+ 1.82	90 56 18.46	+ 11.13

David Gill.