

Schreiben des Herrn Professors *Kendall* an den Herausgeber.

Philadelphia. April 27. 1843.

Sir

I send you the result of the observations of the great Comet of February 1843, made by Mr. *Walker* and myself with the *Fraunhofer* Equatorial at the Observatory of the Central High School. Latitude $39^{\circ} 57' 8''$. Longitude $5^h 0^m 41^s.9$ west of Greenwich. The measures were all made with the *Fraunhofer* Filarmicrometer, power 75 except on the 9th and 10th of April when the extreme faintness of the Comet compelled us to use the Ring-Micrometer. We first saw the nucleus on the 11th of March, and brought the Comet to the centre of the field and read the graduations. The place given on that evening is liable to an error of 2 minutes of space. That of the 10th of April is liable to an error of about 1 minute of space. Those of the other evenings were the result of satisfactory measures. The nucleus, on the 11th of March was near the star ζ Ceti of the third magnitude and was of about the same brightness. The tail extended between Rigel and Sirius, about one degree South of its position on the 18th when we saw it and also the nucleus but made no measures. In the Comet searcher, the nucleus appeared on the 11th with a well defined disc larger than that of Jupiter in the same instrument. In

the 9 feet equatorial it had no appearance of a disc, but only of a nebulosity gradually condensed toward the Centre, so that it was impossible to distinguish any nucleus. I have no doubt that this comet was seen in the day time on the 28th of February and 1st of March. The particulars are stated at length in Professor *Silliman's* Journal. An observer at Woodstock, Vermont saw the nucleus and tail in a good telescope probably a $3\frac{1}{2}$ feet Dollond. Mr. *Clark* of Portland, Maine, a teacher of Navigation, measured its distance from the sun's limb at the time of culmination and found it to be $6^{\circ} 15\frac{1}{2}'$ *). Professor *Loomis* of Western Reserve College, Hudson, Ohio has computed the intensity of the comet's light on the 28th of February, and finds it to have been 24 times brighter than on the 11 of March that is 24 times brighter than a star of the third magnitude.

*) In dem versiegelten Brief war ein Zettel eingesteckt, auf dem folgendes steht:

To Professor *Schumacher*. — After sealing ascertained that Mr. *Clark's* distance of the Comet from the Sun's limb was $4^{\circ} 6\frac{1}{2}'$. E. O. K.

Observations of the great Comet of 1843 with the 9 feet *Fraunhofer* Equatorial at the High School Observatory
Latitude $39^{\circ} 57' 8''$ Longitude $5^h 0^m 41^s.9$ West of Greenwich by Scars *C. Walker* and *E. Otis Kendall*.

Date. 1843.	No.	Siderial Time. μ	Comet's apparent.		
			Right Ascens. α	Declination. δ	
March 11	1	$6^h 37^m 22^s.0$	$1^h 43^m 35^s$	$-11^{\circ} 35' 23''$	
19	2	7 1 9,72	a+ 42,087		* 8.9 Anon. Approx. a = $2^h 56^m 28^s$ a' = $-9^{\circ} 25' 30''$
	3	7 2 26,12	a+ 42,787		* 7.8 B ₂ b = 2 57 37,68 b' = $-9^{\circ} 33' 31,84$
	4	7 3 28,32	a+ 43,086		* 9.10 Filarmicr. c = b + 9,89 c' = b + 6 4,80
	5	7 8 5,00		a' — 1' 18,86	= 2 57 47,57 c' = $-9^{\circ} 27' 27,04$
	6	7 12 0,70		a' — 1 26,82	
	7	7 13 38,00		a' — 1 26,82	
	8	7 16 29,19		c' + 30,62	
	9	7 24 29,67	b— 20,039	b' + 6 37,70	
	10	7 38 3,64	b— 16,177	b' + 6 59,32	
21	11	7 16 50,46	d— 8,395	d' + 2' 53,88	* 9.10 Anon. Approx. d = 3 11 19, d' = $-8^{\circ} 55' 32$
	12	7 19 39,46	d— 7,469	d' + 2 57,74	* 9.10 Anon. — e = 3 11 34, e' = $-8^{\circ} 50' 49$
	13	7 28 28,11	e— 19,957	e' — 1 23,41	
	14	7 30 54,40	e— 19,477	e' — 1 46,01	
	15	7 42 26,84	d— 12,170	d' + 2 53,42	
	16	7 46 19,82	e— 15,273	d' — 1 56,16	
22	17	7 26 32,66	h—1 38,629		* 10 Anon. Approx. f = 3 17 31 f' =
	18	7 29 35,65	f+ 9,900		* 9.10 Anon. — g = 3 18 32 g' =
	19	7 29 35,65	g— 48,298		* 7.8 B ₁ , L ₁ h = 3 19 17,08 h' = $-8^{\circ} 32' 6,08$
	20	7 29 35,65	h—1 33,637		
	21	7 35 52,35	h—1 34,037		

Date.	No.	Siderial Time.	Comet's apparent.	
			Right Ascens.	Declination.
1843.		μ	α	δ
March 22	22	7 ^h 43 ^m 9 ^s 33	*	h' 3' 57" 07
	23	7 44 49,32		h' 4 1,28
	24	7 55 55,51	h—1 ^m 31 ^s 171	
	25	7 56 11,31	h—1 32,971	
	26	8 2 28,40	g— 43,298	
	27	8 2 28,40	h—1 29,796	
	28	8 2 28,40	h—1 29,796	
	29	8 2 44,40	g— 43,998	
23	30	7 27 38,91	i— 38,374	* 8 B _L _i i = 3 ^h 24 ^m 25 ^s 03, i' = —8°22' 38"02
	31	7 27 46,50	i— 39,574	
	32	7 30 1,00	i— 38,172	
	33	7 30 9,91	i— 38,072	
	34	7 31 12,29	i— 37,372	
	35	7 31 20,19	i— 37,272	
	36	7 38 0,19		i' + 3 16,69
	37	7 40 0,18		i' + 3 19,26
	38	7 43 0,17		i' + 3 17,06
	39	7 49 42,94	i— 33,946	
	40	7 49 56,54	i— 33,355	
	41	7 51 4,74	i— 33,254	
	42	7 51 17,14	i— 34,754	
	43	7 53 18,63	i— 33,151	
	44	7 53 32,02	i— 33,351	
	45	8 4 35,69	i— 30,634	
	46	8 4 48,99	i— 29,952	
24	47	7 33 44,85	k— 36,732	* 8.9, B _i k = 3 30 12,86, k' = —8°10' 56"86
	48		l— 41 439	* 8.9, B _i .L _i , l = 3 30 17,24, l' = —8 10 4,51
	49	7 33 37,95	k— 36,732	* 8, B _i , m = 3 30 31,57, m' = —8 0 13,08
	50		l— 39,939	* 8,9, Filarmicr. l = k + 4,56, l' = k' + 48,81
	51	7 34 54,55	k— 36,431	
	52		l— 41,038	
	53	7 35 7,35	k— 36,831	
	54		l— 41,138	
	55	7 36 27,64	m— 55,205	
	56		m— 55,105	
	57	7 36 40,64	m— 55,006	
	58		m— 55,006	
	59	7 42 48,83		m'— 3 41,06
	60	7 45 53,83		l' + 6 25,95
	61	7 47 45,83		k' + 7 24,59
	62	7 49 38,82		k' + 7 27,46
26	63	7 57 39,79	n + 21,568	* 8.9, L _i n = 3 40 9 47, n' = —7 29 53,63
	64		o— 37,204	* 8 B _i .L _i o = 3 41 8,18, o' = —7 30 2,58
	65	7 57 49,69	n + 20,758	
	66		o— 37,404	
	67	7 59 39,17	n + 20,567	
	68		o— 37,405	
	69	7 59 49,17	n + 20,368	
	70		o— 37,605	
	71	8 6 1,96		n'— 2 29,16
	72	8 7 50,94		o'— 2 9,10
	73	8 15 38,84	n + 24,252	
	74		o— 33,322	
29	75	8 11 31,20	p + 2 26,299	* 9, Anon.Appr. p = 3 52 48, p' = —6 50 3
	76	11 38,80	p + 2 25,999	* 7.8 Anon. — q = 3 57 31, q' = —6 47 59
	77	14 9,50	p +	* 9 Anon. — r = 3 57 41, r' = —6 52 5

Date.	No.	Siderial Time.	Comet's apparent.	
			Right Ascens.	Declination.
1843.		μ	α	δ
March 29	78	8 ^h 34 ^m 9 ^s 80	q -2 ^m 23 ^s 220	
	79		r -2 32,855	
	80	34 21,40	q -2 23,120	
	81		r -2 32,055	
	82	38 7,10	q -2 25,622	
	83		r -2 35,250	
	84	38 20,20	q -2 24,322	
	85		r -2 34,149	
	86	56 37,49		r' + 2' 48" 63
April 1	87	8 30 42,86	s - 23,452	
	88	30 49,76	s - 22,953	
	89	31 29,85	s - 22,354	
	90	31 35,95	s - 22,954	
	91	34 45,24		s' - 5 44,14
	92	39 44,84		t' + 28,23
	93	43 31,04	t -1 2,493	
	94	43 39,84	t -1 2,493	
	95	45 18,73	s - 21,281	
	96		t -1 2,692	
	97	45 28,83	s - 20,082	
	98		t -1 1,892	
	99	46 58,62	s - 20,285	
	100		t -1 1,592	
2	101	47 7,72	s - 20,585	
	102		t -1 1,892	
	103	8 16 31,70	u -1 32,615	
	104	16 41,80	u -1 32,515	
	105	20 39,50	u -1 32,516	
	106	20 49,50	u -1 32,316	
	107	29 18,31		u' - 2 45,13
	108	31 18,31		u' - 2 30,33
	109	42 10,41	u -1 29,428	
	110	42 21,12	u -1 28,328	
7	111	44 40,32	u -1 29,030	
	112	44 50,13	u -1 27,730	
	112	8 51 28,04	v +1 57,397	
	113		y -1 47,372	
	114		y -1 48,172	
	115	51 40,14	v +1 56,897	
	116		w + 58,149	
	117		x + 36,353	
	118		z -1 50,928	
	119		z -1 51,528	
	120	57 46,16	v +1 57,396	
	121		y -1 47,067	
	122		y -1 47,267	
	123	57 59,26	v +1 57,396	
9	124		w + 58,456	
	125		x + 37,446	
	126		z -1 50,532	
	127		z -1 50,432	
	128	8 50 13,92	A - 15,232	A' - 9 33,90
	129	9 0 6,37	13,329	9 39,26
	130	2 40,02	13,958	9 7,56
	131	8 19,92	11,257	8 51,77

* 9, Anon. s = 4^h 8^m 15^s 74, s' = -6° 5' 50"

* 8.9, Anon. t = 4 8 57,60, t' = -6 12 0

Note s and t were determined by the Filarmicrometer, and s' and t' are approximate.

* 9, B, u = 4 13 21,223, u' = -5 56 13,37

* 8, B₂, L₂, v = 4 27 36,40, v' = -5 3 46,09

* 9, Anon. w = 4 28 36, w' =

* 9, Anon. x = 4 28 57, x' =

* 8, B₂, L₁, y = 4 31 21,13, y' = 5 7 25,53

* 9, B₁, L₁, z = 4 31 24,05, z' = 5 0 48,52

* 9, B₁, A = 4 36 4,31, A' = -4 35 56,58

Date.	No.	Siderial Time.	Comet's apparent.	
			Right Ascens.	Declination.
1843.		μ	α	δ
April 9	132	9 ^h 16 ^m 4 ^s 96	A — 10° 430	A' — 9' 19" 36
	133	19 21,91	11,931	9 37,41
	134	22 21,21	10,349	9 7,67
10	135	9 36 13,50	A — 2 56,55	A' — 45,0

Mean Time Philadelphia.		Star of comparison.	Number of mea- sures.	Comet's observed R. A. Corrected for parallax but not for Aberr.		Number of mea- sures.	Comet's observed Decl. Corrected for parallax but not for Aberration.	
d	h m s			h m s				
1843 March 11.	7 21 20,79	* b, 7.8, B ₂	2	1 43 35			— 11° 35' 23"	
— 19.	7 25 55,68	* c, 9.10, Fil.		2 57 14,46	2		— 9 26 50,44	
— 22.	7 46 48,46	* h, 8.9, B ₁ L	7	3 17 44,47	1		— 9 26 53,02	
— 23.	7 39 59,79	* i, 8, B ₁ L	14	3 23 50,21	2		— 8 35 58,55	
— 24.	7 26 51,79	* k, 8.9, B ₁ L	4	3 29 36,44	3		— 8 19 13,16	
		* l, 8.9, B ₁ L	4	36,61	2		— 8 3 35,48	
		* m, 8, B ₁ L	4	36,74	1		40,35	
— 26.	7 36 10,32	* n, 8.9, L ₁	5	3 40 28,98	1		54,90	
		* o, 8, B ₁ L ₁	5	29,59	1		— 7 32 27,12	
April 1.	7 0 20,88	* s, 9, Fil.	8	4 7 54,53	1		32 17,14	
		* t, 8.9, Fil.	6	54,68				
— 2.	7 48 6,35	* u, 9, B ₁	8	4 11 50,91	2		— 5 58 46,84	
— 7.	7 52 10,20	* v, 8, B ₂ L ₂	4	4 29 33,93				
		* y, 8, B ₂ L ₁	4	33,93				
		* z, 9, B ₁ L ₁	4	33,44				
— 9.	7 57 59,64	* A, 9, B ₁	7	4 35 52,21	7		— 4 45 38,29	
— 10.	8 21 46,25	* A, 9, B ₁	1	4 39 1	1		— 4 36 38	

Apparent places of the stars compared above with the comet.

Name.	R. A.	Decl.	Name.	R. A.	Decl.
	h m s			h m s	
b	2 57 37,68	— 9° 33' 31" 84	o	3 41 8,18	— 7° 30' 2" 58
c	2 57 47,57	9 27 27,04	s	4 8 15,74	
h	3 19 17,08	8 32 6,08	t	4 8 57,61	
i	3 24 25,03	8 22 38,02	u	4 13 21,22	5 56 13,37
k	3 30 12,86	8 10 56,86	v	4 27 36,41	5 3 46,09
l	3 30 17,24	8 10 4,51	y	4 31 21,13	5 7 25,53
m	3 30 31,57	8 0 13,08	z	4 31 24,05	5 0 48,52
n	3 40 9,48	7 29 53,63	A	4 36 4,31	4 35 56,58

From the observations of the 19th and 26th of March and 2^d of April, we have computed the following elements.

Perihelion passage, February 27 ^d 436953			Mean Time Greenwich.
Longitude of the Ascending node	1° 55' 18" 6	}	From the mean equinox of March 26 th
Longitude of the perihelion	277 43 53,7		
Inclinaison	35 34 0,8		
Perihelion distance	0,00701906		log. q = 7,8462789
Motion retrograde.			

The Ephemeris computed from these elements, after applying aberration, requires the following corrections in order to agree with our observations:

	Corr. in R. A.	Corr. in Decl.
	$\frac{1}{15} \Delta \alpha$	$\Delta \delta$
March 19	— 0 ^s 33	+ 38 ["] 3
22	— 1,19	+ 5,0
23	— 1,38	+ 27,5
24	— 0,94	+ 1,8
26	— 2,07	+ 23,9
April 1	+ 1,99	
2	+ 4,50	— 21,6
7	+ 7,82	
9	+ 9,25	— 54,1

This corresponds well enough with the observations to be used in computing the parallax and aberration, and in reducing to a common date the places observed during the same half hour. These elements have some resemblance to those of the comet of 1689 as computed by *Pingré* the Inclination however of the latter 69° 17' differs too much to be consistent with their identity. Professor *Benjamin Pierce* of

Harvard University, Cambridge Mass. has recomputed the observations used by *Pingré*, and finds for the elements of the comet of 1689

Perihelion Passage 1689 December 2^d1403 M. T. Greenw.
 Long. Ascending node 344° 18'
 Long. Perihelion 271 16
 Inclinaison 30 25
 Perihelion distance 0,0103
 Motion retrograde.

The elements of the comet of 1843 with a period from 1689 Dec. 2^d1403 to 1843 Febr. 27^d4370, represent the places given by *Pingré* within 5°. Whether the errors of *Pingré's* places of the comet of 1689 together with the effect of perturbations amount to 5° is a subject worthy of investigation. It has never happened I believe that two comets have appeared with elements agreeing so well, without being found in the end to be the same.

E. Otis Kendall.

Schreiben des Herrn *De-Vico*, Directors der Sternwarte des Collegio Romano, an den Herausgeber.
 Roma dal Coll. Rom. 11 Maggio 1843.

Frattanto a Posta corrente Le fo sapere, che dopo penose ricerche mi è infine riuscito di ritrovare qui in Roma la Carta „Observationes Goæ habitae etc.“ con una breve dichiarazione. Fu tutto questo stampato nel Giornale di Roma di quell'anno; ma è un' opera molto rara. Di più ho trovate le osservazioni del P. Gottignies, e parecchie altre notizie molto interessanti. Per utilità della Scienza ho raccolte tutte queste cose e le fo stampare immantinente qui in Roma per poi spedirne subito le Copie a tutti gli Osservatori. Perciò la S. V. se le godrà prima di tutti gli altri; perchè spero di poterne fare l'invio nella Posta del prossimo Sabato, o al più di Martedì futuro.

Credo che Ella avrà già ricevute le Osservazioni, che le ho mandate in una mia del 18 Aprile. e comprendevano un arco grande (per quanto si è potuto) di Orbita; cioè dai 17 Marzo fino ai 6 d'Aprile. Nell' ultima Osservazione del 6 Aprile invece di $\delta = d + 57^{\circ}92 (15 \cos \delta)$ son dubbio per l'incertezza della scrittura di chi stava all' orologio se debba

scriversi $\delta = d + 57^{\circ}02 (15 \cos \delta)$. Noto questo per maggiore esattezza.

Del resto l'Opera del de Gottignies „De figuris Cometa-rum qui apparuerunt annis 1664, 1665, 1668 etc.“ non si è potuta fin qui trovare in nessun luogo affatto. Le indagini che ne ho fatte, e ne faccio fare tuttora, sono incredibili; ma tutte in vano. Ho bensì trovati dei libri con un titolo a questo somigliantissimo; e vi si parla a lungo delle comete del 1664 a 1665; ma di questa del 1668 neppure una sola parola. Per altro sono certissimo che il P. Gottignies non avrà detto in quel libro (se pure esiste) nè più nè meno di quello che egli fece stampare nel Giornale dei Letterati, dove si trovano riportate tutte le sue Osservazioni di questa Cometa. La maniera, con cui sono esposte, mostra evidentemente che non saprebbe egli dire di più.

Francesco De-Vico.

Schreiben des Herrn Geheimen-Raths *Bessel*, Directors der Königsberger Sternwarte,
 an den Herausgeber.
 Königsberg 1843. Mai 21.

Den Kometen des Herrn *Mauvais*, dessen am 3^{ten} Mai erfolgte Entdeckung Sie uns so schnell angezeigt haben, daß ich Ihnen meinen besonderen Dank dafür nicht verschweigen

kann, hat Herr *Schlüter*, sobald Mondschein und Witterung es verstatteten, aufgefunden. Er hat ihn zweimal am Helio-meter beobachtet: